Higher Education Reform in China

Beyond the expansion

Edited by
W. John Morgan and **Bin Wu**

China Policy Series

Higher Education Reform in China

A major transformation of Chinese higher education (HE) has taken place over the past decade – China has reshaped its higher education sector from elite to mass education with a rapid growth in the number of its graduates from less than 1 million a year in 2000 to some 6.3 million a year by 2010. China is exceptional among lower income countries in using tertiary education as a development strategy on such a scale, aiming to improve the quality of its graduates and make HE available to as many of its citizens as possible.

This book provides a critical examination of the challenges to the development and sustainability of higher education in China: Can its universities move from quantity to quality? How will so many graduates find jobs in line with their expectations? Can Britain and other Western countries continue to benefit from China's education boom? What are the prospects for collaboration in research? This book evaluates the prospects for Chinese and foreign HE providers, regulators and other stakeholders. It introduces the key changes in China's HE programme since the Opening-Up policy in 1978 and analyses the achievements and the challenges over the subsequent three decades. Furthermore, it sheds light on new reforms that are likely to take place in the future, particularly as a result of the ongoing international financial crisis.

W. John Morgan is UNESCO Chair of the Political Economy of Education, School of Education, University of Nottingham, UK, and Chairman of the UK National Commission for UNESCO. He was recently guest co-editor of a Special Issue of *The European Journal of Education* on 'Chinese–European Co-operation in Education'.

Bin Wu is Senior Research Fellow at the China Policy Institute in the School of Contemporary Chinese Studies, University of Nottingham, UK. His recent publications include, as co-editor, *Sustainable Reform and Development in Post-Olympic China* (also published by Routledge) and guest co-editor of a Special Issue of *The Journal of Contemporary China* on 'Openness of Chinese Society: progresses and challenges'.

China Policy Series
Series Editor
Zheng Yongnian, China Policy Institute,
University of Nottingham, UK

1. **China and the New International Order**
   Edited by Wang Gungwu and Zheng Yongnian

2. **China's Opening Society**
   The non-state sector and governance
   Edited by Zheng Yongnian and Joseph Fewsmith

3. **Zhao Ziyang and China's Political Future**
   Edited by Guoguang Wu and Helen Lansdowne

4. **Hainan – State, Society, and Business in a Chinese Province**
   Kjeld Erik Brodsgaard

5. **Non-Governmental Organizations in China**
   The rise of dependent autonomy
   Yiyi Lu

6. **Power and Sustainability of the Chinese State**
   Edited by Keun Lee, Joon-Han Kim and Wing Thye Woo

7. **China's Information and Communications Technology Revolution**
   Social changes and state responses
   Edited by Xiaoling Zhang and Yongnian Zheng

8. **Socialist China, Capitalist China**
   Social tension and political adaptation under economic globalisation
   Edited by Guoguang Wu and Helen Lansdowne

9. **Environmental Activism in China**
   Lei Xei

10. **China's Rise in the World ICT Industry**
    Industrial strategies and the catch-up development model
    Lutao Ning

11. **China's Local Administration**
    Traditions and changes in the sub-national hierarchy
    Edited by Jae-Ho Chung and Tao-chiu Lam

12. **The Chinese Communist Party as Organizational Emperor**
    Culture, reproduction and transformation
    Zheng Yongian

13. **China's Trade Unions – How Autonomous Are They?**
    Masaharu Hishida, Kazuko Kojima, Tomoaki Ishii and Jian Qiao

14. **Legitimating the Chinese Communist Party since Tiananmen**
    A critical analysis of the stability discourse
    Peter Sandby-Thomas

15. **China and International Relations**
    The Chinese view and the contribution of Wang Gungwu
    Zheng Yongnian

16. **The Challenge of Labour in China**
    Strikes and the changing labour regime in global factories
    Chris King-chi Chan

17. **The Impact of China's 1989 Tiananmen Massacre**
    Edited by Jean-Philippe Béja

18. **The Institutional Dynamics of China's Great Transformation**
    Edited by Xiaoming Huang

19. **Higher Education Reform in China**
    Beyond the expansion
    Edited by W. John Morgan and Bin Wu

Higher Education Reform in China

Beyond the expansion

Edited by W. John Morgan and Bin Wu

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2011
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

This edition published in the Taylor & Francis e-Library, 2011.

To purchase your own copy of this or any of Taylor & Francis or Routledge's collection of thousands of eBooks please go to www.eBookstore.tandf.co.uk.

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

Higher education in contemporary China : beyond the expansion / edited by W. John Morgan and Bin Wu.
p. cm. – (China policy series)
Includes bibliographical references and index.
1. Education, Higher–China. 2. Educational change–China. 3. Educational innovations–China. 4. Education and state–China.
I. Morgan, W. John. II. Wu, Bin.
LA1133.H535 2011
378.51'09051–dc22

2010038601

ISBN 0-203-82895-X Master e-book ISBN

ISBN: 978-0-415-56413-7 (hbk)
ISBN: 978-0-203-82895-3 (ebk)

Contents

Tables

Figures

Acronyms

CCRTVU	Central China Radio and Television University
CEBSAT	China Education Network Satellite
CEPA	Closer Economic Partnership Agreement
CERNET	China Education and Research Network
CINIC	China Internet Network Information Centre
HEEC	Higher Education Evaluation Centre
HKCAAVQ	Hong Kong Council for Accreditation of Academic and Vocational Qualifications
HKEAA	Hong Kong Examination and Assessment Authority
HKVTC	Hong Kong Vocational Training Council
MoE	Ministry of Education
NAHEEE	National Adult Higher Education Entrance Examinations
NBS	National Bureau of Statistics
NEE	National Entrance Examinations
OUC	Open University of China
OECD	Organization for Economic Co-operation and Development
PISA	Programme for Student Assessment
SDR	Survey of Doctorate Recipients
SED	Survey of Earned Doctorates
SEC	State Education Commission
UCAS	University Clearing and Admissions Service
UGC	University Grants Committee
UNESCO	United Nations Educational, Scientific and Cultural Organization
WTO	World Trade Organization

Editors and contributors

Aijuan Chen is a professor in the School of Economics and Management at Xian University of Technology, Xian, China.

John Cribbin is Registrar and Secretary of the School of Professional and Continuing Education, University of Hong Kong, Hong Kong, China.

Dasheng Deng is an assistant professor at the Chinese Academy for Science and Technology for Development, Beijing, China.

Xiaohao Ding is deputy director of the Institute of the Economics of Education, Graduate School of Education, Peking University, Beijing, China, 100871.

Fengliang Li is an associate professor, Institute of Educational, Tsinghua University, Beijing, China, 100084.

W. John Morgan is chairman of the United Kingdom National Commission for UNESCO and UNESCO Chair of the Political Economy of Education, School of Education, University of Nottingham.

Bernadette Robinson is a special professor in the School of Education and research fellow in the China Policy Institute, University of Nottingham, UK.

Janette Ryan is Research Associate, China Centre, University of Oxford, UK.

Mo Shukun is a professor at Inner Mongolia Provincial Radio and TV University, China.

Yuze Sun is an assistant professor at the China National Institute of Educational Research, Beijing 100088, China.

Naixia Wang is a university teacher of Mandarin, School of Contemporary Chinese Studies, University of Nottingham, UK.

Bin Wu is senior research fellow, School of Contemporary Chinese Studies, University of Nottingham.

Shuoqin Yan is an associate professor, Department of Journalism, the Open University of China, Beijing, China.

Rui Yang is an associate professor, School of Education, University of Hong Kong.

Yandong Zhao is a professor at the Chinese Academy of Science and Technology for Development, Beijing, China.

Acknowledgements

Some of the chapters in this volume were presented initially to the Higher Education Panel of the International Forum for Contemporary Chinese Studies, 'Post-Olympic China: Globalization and Sustainable Development after Three Decades of Reform', held at the School of Contemporary Chinese Studies, University of Nottingham, 19–21 November, 2008. Thanks go to the organizers of the conference, especially Professor Shujie Yao and Mr. Richard Pascoe. We thank also Taylor and Francis, Elsevier Science International and the editors of *Education, Knowledge & Economy* and of the *International Journal of Educational Development* respectively for permission to re-publish material in Chapters 4 and 6. We thank Mrs Joyce Morgan for preparing the index. Finally we thank Mr Peter Sowden and Ms Jillian Morrison at Routledge for their patience and support during the preparation of the book.

Introduction

W. John Morgan and Bin Wu

A major transformation of Chinese higher education has taken place over the past decade with a rapid growth in the number of its graduates from less than 1 million a year in 2000 to stand now at 6.3 million a year. At the same time, record numbers of Chinese students still go abroad to study. It is expected that within the next five years China will have more PhD engineers and scientists than the USA. China is attempting also to make higher education available to many more of its citizens, while also continuing to develop the quality of its graduates. China is exceptional among lower income countries in using tertiary education as a development strategy on such a scale. But has China got its policies right? Can its universities move from quantity to quality? How will so many graduates be able to find jobs in line with their expectations? Can China achieve sustainable higher education development instead of fluctuation or even standing still? What are the implications of China's higher education development for international provision? What are the prospects for collaboration in research? The purpose of this book is to provide a critical examination of these issues and to consider the prospects for Chinese and foreign providers, regulators and other stakeholders regarding the future of China's higher education.

The unique experience of the rapid expansion of Chinese higher education over the last decade has attracted increasing attention from academic scholars both in China and outside. While such broad and multi-dimensional research studies are useful, an integrative perspective is even more important to deepen our understanding of the complexity of the expansion in terms of the process and consequences. This introductory chapter aims to: provide an initial review of literature; clarify the approaches employed by scholars for analysing the phenomenon; explore the research gaps and possible ways ahead; outline the book's structure and the key features of each chapter.

Multiple approaches to higher education expansion

Given the many factors involved, consideration of the expansion of Chinese higher education may be approached from different perspectives. Regardless of disciplinary background and policy orientation, the relevant literature can be

divided and summarised according to several perspectives of which we have chosen: demand–supply, interest relation, social justice and globalization.

The demand–supply perspective

This deals with economic factors related to the balance/unbalance between the demand from the Chinese labour market and the supply of higher education graduates in terms of either or both quantity and/or quality. The literature includes: estimation of the growth trend and space of the high skilled labour market driven by Chinese economic growth, calculation of the 'purchasing' intention and capacity of potential students and their parents, analysis of the supply structure, capacity and potential from the higher education institutions, investigation of development status (balance/unbalance) of demand and supply (Li and Xing, 2009; Wan, 2006).

Despite differences in terms of angles, methods and explanatory power, scholars in using this perspective share certain elements as follows:

- They are limited to the higher education sector only and give little consideration to social and political changes or to the adjustment of interest relationships amongst stakeholders (e.g. students/parents, higher education institutions institutes, investors, and power/ruling groups).
- They focus on the functional relationship between the demand and supply sides with little attention paid to the quality differentiation amongst higher education providers and the change of interest relationship between them.
- They provide quantitative analysis based upon official statistics or questionnaire surveys without qualitative information regarding opinions, voices and comments from teachers, students/parents, administrators, and other stakeholders.

The interest relationship perspective

This approach considers the dynamics of the higher education expansion with a focus on the structural change and interest relationship between the providers and students/parents, and between different stakeholders. The literature using this perspective covers, but is not limited to, the following topics: development of commercialization and privatization in the higher education sector, progress and issues in the establishment of a co-funding system; structural adjustment of the public funding system between central and local governments, the roles of private/non-public funders. Such debates offer insights into internal dynamics of the higher education expansion and challenges facing the system's management (Wu and Zheng, 2008; Zheng, 2009).

Common features shared by this group include:

- treating higher education expansion as a process of new industrial emergence and growth, aiming to understand motivation, dynamics, efficiency, impact and growth trends;

- outlining the structural/interest relationship of different stakeholders in the terms of responsibilities, contributions, challenges and possible solutions;
- quantitative analysis based upon the collection of financial information from higher education institutions.

The social justice perspective

This perspective draws attention to the consequences of higher education expansion for different social groups in terms of access, affordability, employability, distribution of higher education resources by region, and the long term impacts on students and their family livelihoods (Gao and Morgan, 2010; Mok and Lo, 2007; Wu and Zheng, 2008; Yao *et al.*, 2008). As unemployment of higher education graduates grows as a problem, this theme attracts increasing attention.

Common features shared by this approach include:

- Using a broad perspective to bring social change, economic transition and political implications into the process of understanding higher education expansion;
- Paying more attention to social equality and inclusion/exclusion aspects of higher education expansion with vulnerable groups, such as migrants and minorities and specific regional concerns;
- Combining official data with empirical studies such as questionnaire surveys to indentify the voices and needs of and consequences for vulnerable groups.

The global perspective

The phenomenon of the higher education expansion in China cannot be fully understood unless put into the broad context of the globalization of both the economy and of the sector. For the former, the literature draws attention to the increasing demand following China's accession to the World Trade Organization and also the influence of the global labour market for highly skilled workers. For the latter, the process of higher education expansion is viewed as either a part of global competition in the market for Chinese students, or the increasing demand from foreign students to study in China. Nonetheless, it can be analysed as part of the global experience of higher education expansion in both developed and developing countries, the promotion of research capacity and the drive to create world-class universities, and to improve standards of teaching and curriculum (Daniel, 2007; Zhao and Sheng, 2008; Zhong, 2007).

The global perspective has the following features:

- Higher education expansion is viewed as a part of China's rise and her integration with the international community, in order to understand the external demand and dynamics;
- An emphasis on international experience as a reference for China's higher reform and development;

- International comparison of higher education management, research and teaching standards and methods to improve the China system.

Possible ways ahead

There is no strict boundary between the above approaches and much of the literature overlaps. Indeed, given the complexity of China's higher education expansion, different approaches and dimensions make their own contributions, with their own specific advantages and disadvantages for understanding this phenomenon. This raises the question of how we can bring them together to form an overall picture of Chinese higher education expansion from which deeper and more robust research can be carried out. In the post-expansion era, the aim for China's higher education is to promote qualitative improvement in order to provide a solid support for national and global sustainable development. Here we consider a number of principles and objectives for higher education development in the era of its post-expansion, and identify the research gaps and the further questions analysed in this volume.

Chinese higher education development in the post-expansion era

In the post-expansion era, the development of China's higher education sector should be understood within a broad context of economic development, social justice and environmental sustainability at both national and international levels. That being so, the following principles and objectives should be considered by Chinese regulators, higher education providers and researchers: development of human capital, promotion of social justice, and enhancement of international cooperation.

The development of human capital

China's rise and sustainable development depends on the optimum use of its huge human resources (Liu, Zhang and Zhang, 2010). However, an examination of the higher education sector reveals a number of constraints:

- The quality of graduates does not match the needs of employers in different sectors. This can be observed from different aspects such as inappropriate knowledge base, lack of practical expertise and operational capacity, low moral standards and inadequate sense of social responsibilities.
- The lack of an adequate interface with labour markets to cope with challenges from the high unemployment rate of graduates. From the perspective of provision, this is related to both the allocation of higher education resources by region, sector and subject areas; and also the quality of higher education institutions facilities, programmes and teachers.
- The lack of connection across degree, professional and vocational, formal and informal education. The overemphasis on degrees and on formal education has

resulted in a rigid structure, not only of higher education resource distribution, which ignores much potential student capacity, but also increases the gap with the actual needs of labour markets and potential employers.

It is urgent to rethink the missions, objectives and strategies of China's higher education development. This being so, research on higher education policy and provision can play a crucial role in providing a strategic picture, based on reliable and comprehensive data, and robust analyses and policy suggestions to assist the Chinese public, State and higher education providers.

The achievement of social justice

If higher education expansion in the past was driven mainly by the demand from and income growth of urban residents and parents, the development and sustainability of China's higher education sector will depend increasingly on the rural population and low income families in inland regions. This raises questions about the relationship between higher education development and social justice. Such issues become more serious taking into account the high unemployment rate of graduates, aggravating economic and social inequality, and the uneven distribution of higher education resources. A number of important issues need to be addressed:

- The consequences of higher education expansion on regional/local economic development, on income (re)distribution and on the livelihoods of low income families in urban and rural areas in particular.
- The demand potential for and the affordability of higher education from less developed regions and low income groups and their access to and selection of suitable courses in higher education. This is very important given continuing social change in China, such as rural–urban migration and the aspiration to social mobility of the younger generation.
- The space and path of higher education adjustment in favour of social justice in terms of regional distribution, social group access and skills balance. This requires a rethinking and re-assessment of current funding structures, interest relations and responsibilities among students/parents, higher education providers, local, regional and central government as well as other stakeholders.

The aspiration towards social justice provides a new momentum to broaden and deepen policy research into Chinese higher education. By bringing all stakeholders into the process of higher education development, this perspective offers an opportunity to hear the voices and identify the needs of different social groups and regions. It is not limited to individual students or institutions, but concentrates on the interactions of higher education, the economy, social change and public policy. It is a key perspective for sustainable higher education development in China.

The enhancement of international co-operation

The development of the Chinese higher education sector is part of China's rise and globalisation in which international cooperation plays a number of crucial roles, such as:

- promoting basic and applied research to address the priorities of global sustainable development including: climate change and low carbon economies, Millennium Development Goals for poverty alleviation, global mobility of students and the internationalisation of higher education;
- enhancing mutual and multiple communication and interaction of Chinese higher education institutions with those of other countries to enlarge China's system and to improve the structure of disciplines, courses and resource distribution.
- improving human resource capacity and quality to meet the increasing demands for high skills from international labour markets and multi-national businesses with high standards of corporate social responsibility in support of China's global strategy.

Research gaps and methodological advances

Based upon the principles described above, the following research gaps can be identified in policy studies of China's higher education:

1 The missions, strategy and objectives of higher education development in China.
2 The demand for and the barriers against the employment of graduates.
3 The quality and causes of the variety of higher education provision in China and the impact on graduates.
4 The barriers against rational allocation of higher education resources in China.
5 The relationships between higher, secondary and primary education, between degree and vocational education, and between formal and informal education.
6 The relationship between higher education and social justice, with a focus on the consequences of expansion on local/regional uneven development and increasing economic/social inequality.
7 The contribution of higher education development to China's global strategy, together with the internationalization of China's higher education sector and implications for its reform and development.
8 Deficiencies in and improvements to the regulatory system of the Chinese higher education sector.
9 The paucity and limitations of comparative higher education development research policy analysis.

Understanding higher education development in the post-expansion era requires a theoretical breakthrough which is, in turn, dependent largely on advances in

methodology. In order to achieve this, the following should be given a high priority in research practice:

a Empirical surveys and qualitative methods to bring together the voices, opinions, needs, and suggestions of all stakeholders. It is particularly important to identify the barriers to and the potential benefits of higher education development for vulnerable groups such as rural families, migrant workers and urban low-income families.
b Interdisciplinary studies to provide a whole picture of the dynamics, constraints and potential of higher education development. Alongside conventional educationalists and economists, the contribution of scholars from other disciplines, such as geography, sociology, anthropology and political science, would be valuable.
c Spatial–temporal analyses to provide precise descriptions and predications of higher education development characteristics, changes and trends would be especially enhanced by such an interdisciplinary approach.
d An international comparison of China's higher education expansion and development.

The content and structure of the book

The book provides a critical review of the process and lessons from its expansion on the one hand and explores new ways to enhance our understanding on the other. The following questions are posed for authors and readers to consider:

- What factors or barriers have impeded the development of China's higher education sector in its post-expansion era?
- How can higher education development contribute to social justice?
- What international experience is relevant to the development of China's higher education sector?

This is an edited collection based on papers given originally to the Higher Education Panel of the International Forum for Contemporary Chinese Studies, 'Post-Olympic China: Globalization and Sustainable Development after Three Decades of Reform', held at the University of Nottingham, 19–21 November 2008. Together with some specially commissioned papers, the chapters revised for this book examine the issues outlined above and provide an up to date assessment of Chinese higher education across the range of its provision, including chapters on international influences on curriculum reform and Chinese teacher education, on the Special Administrative Region of Hong Kong, and on the potential of the Chinese knowledge *diaspora*. The book has three parts: building a wider provision, consequences of the expansion and the growing global perspective.

Part I comprises four chapters addressing the process of widening the provision of higher education. From the perspective of social justice, the higher education expansion is a double-edged sword, both widening access for poor regions

and people, and yet increasing the unequal share of higher education resources by region. By linking higher education expansion with local/regional development indicators, Aijun Chen and Bin Wu in Chapter 1 offer insights into regional division, gaps and disparities of higher education resources endowment and potential. This chapter provides a new tool for the authorities to consider and develop different strategies and policies according to the differences in regional economic and higher education development.

In Chapter 2 Naixia Wang considers the problems and potential of university adult higher education. Based upon an extensive survey of three universities in Taiyuan, capital city of Shanxi Province, she examines the demand for life-long learning and the impact of higher education expansion.

Given the context of higher education expansion in developing countries, distance education has been one strategy used by governments to provide expansion at affordable cost. In Chapter 3 Bernadette Robinson, Shuoqin Yan and Shukun Mo consider the role of China's Central Radio and TV University (CCRTVU), the largest university in the world catering for adult students. Since its foundation in 1978 the CCRTVU has contributed to the professional development of individuals in a number of fields, as well as providing second chance opportunities to students unable to study at conventional universities. The chapter concludes with a discussion of the challenges facing CCRTVU, now the Open University of China, in particular, and e-learning development in China more generally.

In Chapter 4 Fengliang Li and W. John Morgan consider private higher education as a new element of the Chinese system which has emerged over the last decade. The chapter reviews the current situation and forecasts the likely trend in several key areas, such as State regulation, funds and competition for enrolments. It focuses on the role played by private higher education in providing access to quality higher education and the acquisition of labour market qualifications by low-income students. The contribution of Non-Governmental Organizations (NGOs) and Inter-Governmental Organizations (IGOs) in the development of Chinese private higher education is also considered.

Part II draws our attention to two key issues: the funding system and labour markets are both crucial to an in-depth understanding of the process and consequences of China's higher education expansion. Xiaohao Ding, Fengliang Li and Yuze Sun in Chapter 5 consider the changes in the funding mechanism of China's higher education system over the past three decades. Bearing in mind that it was built within a planned economy in which the State provided full costs for the sector, introducing a new funding mechanism has become a crucial element in reform and expansion in the last decade. In this chapter, the authors outline the changes in the higher education funding mechanism and provide an analysis of the challenges facing the current funding system. In the context of the current international financial crisis, further reforms and policy implications are discussed.

The big challenge in the post-expansion era is to improve the employment rate of higher education graduates. In Chapter 6, Fengliang Li, W. John Morgan

and Xiaohao Ding draw our attention to the structure and transition of the labour market for such graduates. Based on a large-scale questionnaire survey of graduates nationwide, the authors argue that the high unemployment rate is temporary and could be significantly improved if the interactions between higher education providers and the labour market for graduates could be enhanced.

Providing a link with this analysis, Yandong Zhao and Dasheng Deng consider the occupational orientation of doctoral graduates in China in Chapter 7. Using a survey of 1,900 PhD graduates in 14 universities they consider the factors influencing occupational orientation and the difference between this and actual employment. The correlation between occupational orientation and actual job selection is discussed, associated with the policy implications of the findings presented at the end of the chapter.

The development of China's higher education in the post-expansion era requires an international comparative dimension in order to benefit from the experience of other countries and other systems.

Part III comprises three chapters. In Chapter 8 Janette Ryan draws attention to teacher professional education in China's higher education, with respect to curriculum reform. Over the past decade, China has engaged in wide-ranging curriculum reform at all levels of its education system. As a result, there has been pressure on universities to reform pre-service and in-service teacher professional education to prepare both new and experienced teachers for the challenges and demands of the new basic education curriculum reform. The need for new approaches to teacher professional education and development is documented and discussed in this chapter. A 'nested circles' professional learning community model is highlighted, in which university academics work as partners with teachers and teacher education students in emergent communities of practice to foster teacher-led research into curriculum reform.

In Chapter 9, John Cribbin provides a case-study of higher education reform in the Special Administrative Region of Hong Kong with a focus on lifelong learning. He argues that Hong Kong's aspirations to be an education hub for the region may be more rhetoric than reality. Any consideration of the expansion of China's higher education also needs to take into account the internationalization of higher education globally.

Finally, in Chapter 10 Rui Yang draws attention to an Australian example of the Chinese knowledge *diaspora*. In a context of intensified globalization, factors such as knowledge *diasporas* as 'trans-national human capital' have become increasingly valuable to society. Equipped with their Chinese cultural and educational backgrounds, academic experience in the West, and active membership in the international knowledge system, the Chinese knowledge *diaspora* has emerged as a kind of modern cosmopolitan *literati*. Its members have maintained their cultural identity and made good use of their Chinese background. Such international collaborations, however, are more likely with scholars from Western countries because of difficulties they have experienced in China and Australia and from the current structure of the global knowledge system.

References

Daniel, J. (2007), 'The expansion of higher education in the developing world: what can distance learning contribute?', speech to Chea International Commission Conference 2007, 1 February, Washington, D.C.

Gao, J. and Morgan, W.J. (2010), 'The financial crisis and China's higher education: preparing graduates for their social responsibility', *Weiterbildung*, (2): 32–35.

Li, S. and Xing, C. (2009), 'China's higher education expansion and its labor market consequences', paper presented at the 1st CIER/IZA Annual Workshop: Research in Labor Economics, Renmin University Beijing, 18–19 September. Online at http://www.iza.org/conference_files/LabEco2009/xing_c5544.pdf (accessed 4 March 2010).

Liu, G.G., Zhang, S., and Zhang, Z. (eds) (2010), *Investing in Human Capital for Economic Development in China*, Singapore: World Scientific Publishing Company and Imperial College Press.

Mok, K.H. and Lo, Y.W. (2007), 'The impacts of neo-liberalism on China's higher education", *Journal for Critical Education Policy Studies*, 5 (1). Online at http://www.jceps.com/?pageID=article&articleID=93 (accessed 1 May 2010).

Wan, Y. (2006), 'Expansion of Chinese higher education since 1998: its causes and outcomes', *Asia Pacific Education Review*, 7 (1): 19–31.

Wu, B. and Zheng, Y. (2008), 'Expansion of higher education in China: challenges and implications', *CPI Policy Paper Series*, No. 36. Online at http://www.nottingham.ac.uk/CPI/publications/policy-papers/2008/index.aspx.

Zhao, L. and Sheng, S. (2008) 'China's "great leap" in higher education', *EAI Background Brief* No. 394, East Asian Institute (EAI), National University of Singapore.

Zhong, Y. (2007) 'Globalization and higher education reform in China', Paper presented at the annual meeting of the American Sociological Association, TBA, New York, New York City, 11 August 2007, Online at http://www.allacademic.com/meta/p182760_index.html (accessed 4 March 2010).

Part I

Widening the provision of higher education

1 The regional division of the higher education sector in China

A spatial analysis

Aijuan Chen and Bin Wu

Introduction

Understanding the dynamics and consequences of the expansion of higher education in China requires a multi-dimensional and balanced account of various factors (Wu and Zheng, 2008). While much attention has been paid to the co-funding system and its mechanism (see Chapter 5 in this volume), the geographical distribution of higher education institutions (Yao *et al.*, 2008) and the impact on graduate employment (Bai, 2006; Li *et al.*, 2008) are dilemmas facing scholars seeking to give a balanced account of efficiency and justice when assessing higher education expansion. A good example is the regional gap in higher education development and its consequences for social justice in the era of expansion.

The regional disparity of higher education resources and development in China is not new, but has existed both before and since the foundation of the People's Republic of China in 1949. However, under the planned economy of 1950s, 1960s and 1970s, the uneven distribution of higher education institutions had little impact on social justice. This was because the centralized funding model ensured regional equality in terms of new entrant recruitment, higher education funding allocation and the job allocation of graduates nation-wide; such a system was kept almost unchanged until 1998 when the higher education expansion considered in this book began in earnest.

The expansion of the higher education sector might not have been achieved without the establishment of a co-funding funding system to replace the original centralized funding system. Unlike the old system, in which central government undertook the major responsibility for higher education funding, the new system is essentially one of shared financial responsibility among central government, provincial governments (even sometimes municipal governments at prefecture level), and students or their parents. In this 'triangular funding system', on the one hand tuition fees for students in regular higher education institutions have been kept almost unchanged at around 4,000 to 5,000 Yuan each year since 1999 due to government control. On the other hand, central government funding has concentrated on a number of key national universities (currently 107 institutions), which are located in a few regions and municipals such as Beijing, Shanghai and Jiangsu. As a result, local economic development and financial capacity have become crucial factors in determining local higher education development and potential. Given the increasing regional disparity in economic performance and local financial condition, inevitably,

the decentralization and regionalization of the higher education reform will have a profound impact not only on its development in China, but also on social justice which refers to equal opportunity for all people to get access to and benefit from higher education (Yao *et al.*, 2008). Some regions and their populations may benefit more from such higher education reform and expansion than others; this would be particularly the case with inland provinces and with low-income families.

Many Chinese researchers are concerned about such regional issues in higher education development. For instance, Li (2007) explores the impact of regional economic performances on such development using 20 indicators in his statistical analysis, these include: students, education, resources and expenditure, and infrastructure. Zhang and Feng (2006) consider China as three regions: Eastern, Central and Western in order to assess higher education development status and trend from a regional perspective. By comparison, Zhang (2005) offers useful insights into the relationship between higher education and economic development at a national rather than a regional level.

This chapter also focuses attention on the regional division of the higher education sector in China in the era of post expansion. It does so by analysing the relationship between the actual status of local higher education development status and its potential. The rationale behind this chapter is to show that, whilst the reform and expansion of the higher education sector in China has resulted in increasing the responsibility of local governments in terms of funding, adversely the variety of local economic development means different capabilities of the regions to deliver their share of responsibilities in practice. This has resulted in a gap developing between the need for local higher education development and support from local financial systems, thus creating a lacuna between higher education development status and potential in some regions or provinces. Many questions arise as a consequence: To what extent has the uneven distribution of China's higher education resources led to a regional division in terms of development status and potential? How has the regional division of the sector been influenced by, or related to, local economic development and financial conditions? What are the policy implications for the government if it is to improve the efficiency and justice of the central government funding allocation?

These questions will be considered through a systematic analysis of official statistics at the provincial level. The chapter is organized as follows: The next section provides a description on the regional differences of higher education development and funding allocation in China; this is followed by a statistical model for measuring regional gaps in higher education development status and potential. A classification system will be established to reveal the regional divisions and features of higher education development in China through bringing these two dimensions together. The chapter ends with a conclusion and a consideration of the policy implications.

Regional gaps in higher education funding support

The distribution of higher education resources, institutions and students, among the 31 provinces, regions and municipalities of China was uneven in the past. The question is whether higher education reform and expansion has improved or worsened the situation?

Table 1.1 shows the growth of higher education institutions between 1998 and 2007. The number of higher education institutions (HEIs) nation-wide has seen significant growth from 1022 to 1912 institutions, an increase of 1.87 times over the period; however the growth rate varies greatly from almost nil growth in Jilin (7 per cent) to 2.6 times or more in Nainan, Anhui and Ningxia. Both Hainan and

Table 1.1 Growth of HE institutions by region

No	*Province*[1]	*1998*	*2007*	*Growth (%)*
1	Jiangsu	66	118	179
2	Beijing	63	83	132
3	Liaoning	61	79	130
4	Hubei	54	86	159
5	Henan	51	82	161
6	Shandong	49	110	224
7	Hunan	47	99	211
8	Hebei	46	88	191
9	Guangdong	43	109	253
10	Sichuan	43	76	177
11	Shaanxi	42	76	181
12	Jilin	41	44	107
13	Shanghai	40	60	150
14	Heilongjiang	38	68	179
15	Anhui	34	89	262
16	Zhejiang	32	73	228
17	Jiangxi	31	66	213
18	Fujian	29	72	248
19	Guangxi	28	56	200
20	Yunan	26	51	196
21	Shanxi	23	59	257
22	Chongqin	22	38	173
23	Tianjing	20	46	230
24	Huizhou	20	37	185
25	I. Mongolia	19	37	195
26	Gansu	17	34	200
27	Xingjiang	17	32	188
28	Qinghai	6	11	183
29	Hainan	5	14	280
30	Ningxia	5	13	260
31	Tibet	4	6	150
	Total	1022	1912	187

Note: All statistics in this chapter refer to regular HEIs only. However, besides the regular HEIs, adult HEIs by 2006 will account for 444, nationwide. In this chapter the focus is on regular HE, although we may occasionally include AHE students (however, see also Chapter 2).

Source: China Statistics Yearbook, 2003, 2008.

Ningxia are relatively small regions in terms of land, population and higher education institutions. Furthermore, of the 31 provinces, 13 have doubled the number of their higher education institutions. This growth is explained by the establishment of private or non-public HEIs; a new element in China's higher education sector (see Chapter 4).[2]

From a social justice perspective, the number of higher education students per head of population is more relevant to the theme of this chapter. Table 1.2 shows the growth of enrolment (here both standard and adult students are considered, but also see Chapter 2) per 10,000 population in ten provinces, at different levels of economic development, based upon enrolment in 2007. It seems that all provinces have, to an extent, experienced large-scale growth, or improvement in higher education access. However, from the regional perspective, several questions need to be asked: which regions have gained more benefit compared with others? What factors are responsible for these differences? What, if any, will be the trends and impact in the development of higher education in the near future?

Table 1.2 Growth of HE enrolment by selected provinces (students/10,000 head of population)

No	*Province*	*1998*	*2007*	*2007–1998*	*2007/1998 (%)*
1	Beijing	170.9	682.6	511.7	399
2	Tianjing	82.2	460.0	377.8	560
3	Shanghai	112.8	431.7	318.9	383
4	Hubei	35.6	268.3	232.7	754
5	Shaanxi	41.4	268.3	226.9	648
6	Jiangsu	37.0	254.2	217.2	687
7	Liaoning	47.9	249.8	201.9	522
8	Jilin	44.6	249.3	204.7	559
9	Zhejiang	25.5	224.6	199.1	881
10	Heilongjiang	33.2	220.7	187.5	665
–	–	–	–	–	–
22	I Mongolia	18.1	150.7	132.6	833
23	Sichuan	17.9	150.0	132.1	838
24	Anhui	17.0	148.5	131.5	874
25	Henan	15.7	145.5	129.8	927
26	Xingjiang	26.7	141.4	114.7	530
27	Guangxi	16.6	127.3	110.7	767
28	Tibet	13.7	117.4	103.7	857
29	Yunan	15.1	108.1	93	716
30	Qinghai	17.3	93.0	75.7	538
31	Guizhou	11.6	90.4	78.8	779
	Total	27.3	192.4	165.1	705

Source: China Statistics Yearbook, 1999, 2008.

A detailed analysis of Table 1.2 provides several conclusions as follows:

- After the expansion of higher education all the provinces have experienced a growth in the enrolment of students; indeed a four-fold increase can be seen. In particular, Beijing and Henan have witnessed a more than nine-fold increase (the same trend is seen in both Jiangxi and Shandong, which are not featured in Table 4.2). Generally, the growth rate in less developed regions at the bottom of Table 1.2 is faster than that of advanced regions at the top.
- The rapid growth in the number of students in the least developed regions has resulted in a decline in the gap in higher education enrolment between advanced Beijing and the much less developed Guizhou, from a gap of 14.7 times in 1998 to one of 7.6 times in 2007.
- Despite the rapid development of the sector in less developed regions, the gap between less and advanced developed regions in terms of the student enrolment rate is still large. For instance, the student enrolment rates in the bottom five provinces such as: Guangxi, Tibet, Yunan, Qinghai and Guizhou in 2007 are still low compared with the figures for 1998 of the top three regions of Beijing, Tianjin, and Shanghai. This indicates there is at least a ten-year gap between the top and bottom provinces in terms of higher education access.
- Despite the slow growth rate in the more advanced regions, the gap in the number of students per head of population between the top and bottom provinces continues to expand. For instance, the absolute gap between Beijing and Guizhou in student enrolment per 10,000 of the population was 159.3 in 1998, increasing to 592.2 by 2007. This indicates that people in the higher education-dense regions benefit more from the expansion than those of less dense regions.

These findings suggest that the higher education expansion of the past decade has had some impact in reducing regional differences in the access to the higher education system. Such an improvement, however, should not be overstated, as the distribution of resources and in particular funding resources, remains uneven and, as a result, continues to influence both the current operation of higher education and its development potential. Table 1.3 shows both local economic and development information and higher education funding and ranks both the local GDP per capita and the government budget per student. Considering the top six provinces of Shanghai, Beijing, Tianjing, Zhejiang, Jiangsu and Guangdong respectively, we see their GDP per capita exceeded the 30,000 Yuan mark, while their HE funding was also in the top ten. This indicates that local economic development is closely related to the capacity of the local government to invest in the higher education sector.

The local economy, however, does not determine completely the level of higher education funding. This can be seen from the case of Tibet, which ranks third in the national higher education budget but twenty-seventh in GDP per capita. Among the provinces shown, Sichuan, Jiangxi and Anhui fall into the bottom ten in terms of the higher education budget. It is also interesting to note that both Hubei and Shaanxi province come in the medium category for GDP per capita,

Table 1.3 Local economic development and HE budget in 2007 (Yuan, per capita/student)

Rank	*Province*	*GDP*	*Province*	*HE budget*
1	Shanghai	66,367	Beijing	21,432
2	Beijing	58,204	Shanghai	12,454
3	Tianjing	46,122	Tibet	11,407
4	Zhejiang	37,411	Guangdong	10,597
5	Jiangsu	33,928	Tianjing	9,184
6	Guangdong	33,151	Ningxia	8,248
7	Shandong	27,807	Qinghai	7,737
8	Fujian	25,908	Zhejiang	7,414
9	Liaoning	25,729	Jiangsu	6,135
10	I Mongolia	25,393	Heilongjiang	5,720
–	–	–	–	–
22	Hunan	14,492	Chongqin	4,418
23	Qinghai	14,257	Hainan	4,284
24	Sichuan	12,893	Henan	4,080
25	Jiangxi	12,633	Shaanxi	3,916
26	Guangxi	12,555	Hunan	3,394
27	Tibet	12,109	Hebei	3,333
28	Anhui	12,045	Jiangxi	3,301
29	Yunan	10,540	Sichuan	3,210
30	Gansu	10,346	Hubei	3,125
31	Guizhou	6,915	Anhui	2,853
	Total	18,934	Total	5,445

while their higher education budgets are in the bottom ten according to Table 1.3. This is in direct contrast to Table 1.2, in which they are located in the fourth and fifth positions in terms of higher education student enrolment by head of population, just below the mega cities of Beijing and Shanghai.

Generally, the regional gaps seen in higher education funding can be explained by one or more of the factors given below:

- Central government funding sources are concentrated in a number of key national universities nationwide (at present 107, recognized as the '985 programme' and '211 programme' respectively). From this perspective, it is evident that both Beijing and Shanghai are clearly at an advantage as they host almost 50 per cent of these. In addition to the strength of local economic and financial support, unsurprisingly, higher education institutions in these areas are able to receive more government funding support than their counterparts elsewhere. However, Tibet is an exception as it has a low local GDP per capita, but has a greater higher education funding allocation per student. This is explained by other factors. Tibet is a minority region; smaller in both

population and in the number of higher education institutions and, as a consequence, it is easier (and more politically advantageous) for central government to transfer funding to the regional government.

- Local government funding sources are allocated mainly to locally controlled institutions. A good example of local financial support for higher education development may be been seen in the provinces of Zhejiang and Guangdong; both of which have only a few key national universities and thus receive less funding from central government. Instead, higher education development in these regions is heavily dependent upon local government funding. The greater the local economic development and the local financial revenues, the more likely are local governments to provide strong funding support for local higher education institutions.
- The number of institutions established before the higher education expansion. A good example is Shaanxi province, which was one of the priorities for central government higher education investment in the planned economy. The decentralization of higher education has led to a drop in central government funding in favour of local financial support. As a result, Shaanxi, together with its counterparts Hubei and Sichuan, fell to the bottom of the table for higher education funding.

Different combinations of these factors have resulted in variations in higher education development status and funding conditions as shown in Table 1.3. In order to identify the dynamics and consequences of higher education development in the context of decentralization and the co-funding system, a robust method is needed to measure the regional gaps in higher education development; this is the task of the next section.

Measuring the regional gaps in higher education development

In order to reveal the regional gaps in higher education development and relations with its funding conditions precisely, we need robust methods of collecting and analysing the official data. The relevant indicators are in two categories: Higher education development *status*; and development *potential*. The former includes the following: Higher education student enrolment per 10,000 of the population (X1); postgraduate student enrolment per 10,000 of population (X2); the number of higher education institutions per million of population (X3); proportion of key national universities in total of local higher education institutions (X4). The second category uses various financial indicators, including: Local GDP per capita (X5); financial revenue per capita (X6); financial expenditure on the higher education sector per capita of higher education students (X7) and the proportion of education expenditure of the total local financial expenditure (X8). The relevant information is listed in Annex 1.1.

While details of the data analysis are available in the Annex, Table 1.4 provides a full list of assessment scores and ranks according to the various provinces and

Table 1.4 HE development status and potential by province

Province	*Status*		*Potential*		*GAP*
	FAC_1	*Rank1*	*FAC_2*	*Rank2*	
Beijing	4.08	1	2.39	1	0
Shanghai	1.70	2	1.60	2	0
Tianjing	1.07	3	0.62	6	−3
Shaanxi	0.41	4	−0.60	30	−26
Jiangsu	0.40	5	0.41	7	−2
Hubei	0.19	6	−0.59	28	−22
Liaoning	0.11	7	−0.27	17	−10
Jilin	0.02	8	−0.37	22	−14
Heilongjiang	0.02	9	−0.51	26	−17
Fujian	−0.15	10	0.65	5	5
Hunan	−0.17	11	−0.37	23	−12
Guangdong	−0.21	12	0.83	4	8
Zhejiang	−0.23	13	0.97	3	10
Chongqin	−0.25	14	−0.29	18	−4
Shandong	−0.27	15	0.16	9	6
Shanxi	−0.27	16	−0.35	20	−4
Jiangxi	−0.28	17	−0.27	16	1
Sichuan	−0.30	18	−0.39	24	−6
Anhui	−0.30	19	−0.40	25	−6
Ningxia	−0.32	20	0.28	8	12
I Mongolia	−0.39	21	−0.59	29	−8
Gansu	−0.40	22	−0.30	19	3
Tibet	−0.40	23	−0.57	27	−4
Xingjiang	−0.40	24	−0.23	14	10
Hainan	−0.40	25	−0.12	11	14
Hebei	−0.41	26	−0.14	12	14
Guangxi	−0.51	27	−0.15	13	14

their higher education development status and potential. It should be noted that on the left of Table 1.4, provinces are ranked according to the assessment scores (FAC_1) from high to low based upon a calculation of the higher education development status variables X1 to X4. It should be noted that the higher the score, the greater the higher education development in the province. However, the position of each province in terms of higher education development is not constant or unchangeable. If one considers the potential for higher education development, which is largely related to local funding capacity, FAC_2 offers the scores of each province gained from an assessment based upon variables X5 to X8. The higher the FAC_2 score, the greater the HE development potential in the region. This indicates there is a high possibility for this province to achieve an enlarged higher

education sector, without change of local financial sheconomic conditions. Furthermore, using the FAC_2 score, we can derive a sequential order for all the provinces (Rank2) according to higher education development potential.

Table 1.4 provides a basis upon which we can contrast the higher education development status and potential of each region. Furthermore, by comparing Rank1 and Rank2, one can indicate the regional gap between higher education development status and potential; this is seen in the right column of Table 1.4. The findings can be summarized as follows:

- Zero or a proximate number indicates a balance between higher education development and its potential status. This illustrates that there is suitable financial support, whatever form it may take, whether it be through local economic development or from central government, which is fitted to higher education development status or need. Furthermore, it depicts that the position of development in such a province is likely to be stable. Good examples are Beijing and Shanghai which, both rank at the top in terms of both higher education development status and potential; with a balance between higher education development and funding support from central and local government.
- The 'positive' result denotes a high position in financial or funding terms, but low in higher education development status; this suggests there is a potential to develop or promote such development. The wider the gap, the greater the potential of local higher education development in the near future. A good example is Henan province which is ranked twenty-ninth in terms of higher education development; this is at the bottom of all the provinces listed, whilst its developmental potential is ranked tenth. Given its huge population, the strength of its local economic development and its low proportion of higher education students per head of population, it will almost certainly generate a stronger demand for higher education development.
- The 'minus' denotes a low position in financial or funding terms, but high in development status. It either suggests that the higher education development scale has exceeded the local economic or financial support capacity, or that development is constrained from poor local economic performance or funding support. A good example is Shaanxi province, which ranks fourth in higher education development status, but almost touches the bottom in terms of development potential. This indicates that the higher education institutions in Shaanxi have suffered from several constraints, such as the lack of local economic and financial support and this has impeded its higher education potential.

Using the scores of Table 1.4, we can draw a diagram to illustrate higher education development status and potential and the gap between them. Figure 1.1 shows a balanced status in the middle, which depicts Tianjiang, Qinhai, Shanghai and Gansu; the diagram is clearly not balanced on the left and right sides. It is clear that Table 1.4 and Figure 1.1 provide a means to diagnose HE development status; issues and potential, province by province.

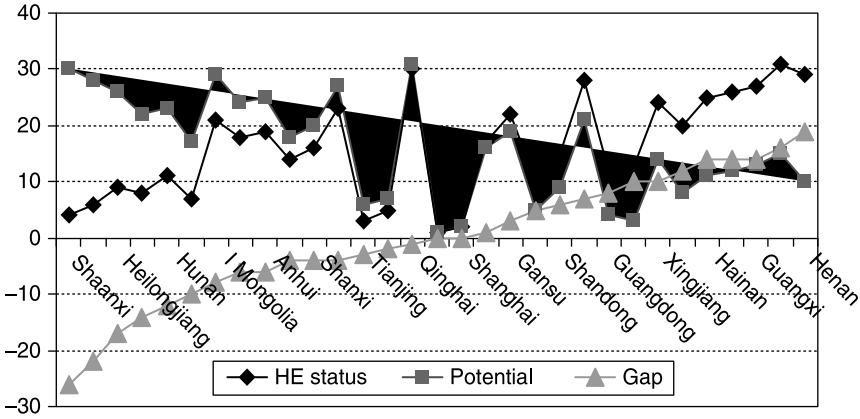

Figure 1.1 Contrast of HE development status and potential.

Regional disparities in higher education development

This section aims to establish a classification system in which the regional disparities in higher education development can be identified according to common features and issues among the respective provinces. Generally, both higher education development status and potential, measured by FAC_1 and FAC_2 scores can be given according to into two categories: high and low, according to their scores. The boundary between these categories can be shown according to the simple algebraic expression of plus or minus. As a result, we can create four zones for higher education development at the provincial level. These are: 1) high development status and potential, 2) high development status but low potential, 3) low development status but high potential, and 4) low development status and potential. Table 1.5 shows the framework and results of classification in which each province can be precisely identified according to their scores expressed in FAC_1 and FAC_2.

Zone I: High development status and high development potential

This comprises three municipalities: Beijing, Shanghai and Tianjing, and an eastern coastal province, Jiangsu. One outstanding feature is that the leading status of higher education development matches strong economic performance and funding support. Consequently, these areas will lead China's higher education development in the near future. However, from a social justice perspective, it should be noted that a large proportion of the central government's funding is also concentrated in these areas and in Beijing in particular. This has resulted in a funding imbalance between Beijing and others illustrated by the exceptionally high scores that Beijing attained for both higher education development status and potential.

Table 1.5 Regional division of HE development by status and potential (2007)

Status	*Low*	*High*
	Zhejiang (–0.23, 0.97); Guangdong (–0.21, 0.83)	Beijing (4.08, 2.39)
	Ningxia (–0.32, 0.28); Fujian (–0.15, 0.65);	Shaanhai (1.70, 1.60)
	Henan (–0.55, 0.04); Shandong (–0.27, 0.16)	Tianjing (1.07, 0.62
		Jiangsu (0.40, 0.41)
Low	Chongqing (–0.25, -0.29); Hunan (–0.17, –0.37)	Shaanxi (0.41, –0.60)
	Jiangxi (–0.28, –0.27); Shanxi (–0.27, –0.35)	Hubei (0.19, –0.59)
	Sichuan (–0.30, –0.39); Anhui (–0.30, –0.40)	Liaoning (0.11, –0.27)
	Gansu (–0.40, –0.30); I. Mongolia (–0.39, –0.59)	Jilin (0.02, –0.51)
	Hainan (–0.40, –0.12); Xingjiang (–0.40, –0.14)	Heilongjian (0.02, –0.51)
	Hebei (–0.41, –0.14); Tibet (–0.40, –0.57)	
	Guangxi (–0.51, –0.15); Yunan (–0.55, –0.35)	
	Guizhou (–0.64, –0.26); Qinghai (–0.57, –0.80)	

Zone II: Low development status and high development potential

Six provinces fall into this category, these are: Zhejiang, Guangdong, Fujian, Shandong, Henan and Ningxia. The first four are eastern coastal provinces. Given the leading position of such provinces in terms of national economic development, higher education development needs cannot be met through local economic and social development, leaving a large space for central and local government to invest in and to develop the higher education sector. However, the exceptions are Henan and Ningxia, both of which are inland provinces that share a common feature in that their local economic performance and financial situations are far better than their higher education development status. This also leaves a space for the further development of the sector. However, Henan is one of the most densely populated provinces in China, similar in size to Shandong, but much smaller in terms of the higher education sector. This is in direct contrast with Ningxia, one of smallest provinces in terms of population size and with a significant ethnic minority population. Given its strong needs and the desire for local support to further its higher education development, such provinces should be priorities for central government investment and for special policy support.

Zone III: Low development status and low development potential

This category accounts for 16, more than half, of the provinces in China. Most are located in western China where both economic performances and higher education development lag far behind the national average. Because such provinces are low in terms of developmental potential, it is unlikely that the higher education sector will see rapid development in the near future. However, this does not

rule out the possibility of a few provinces, on their own initiative, looking for opportunities to accelerate higher education development.

Zone IV: High development status but low development potential

Five provinces fall into this category. These are: Shaanxi, Hubei, Liaoning, Jilin and Heilongjiang. The first two are located in central China, while the latter three are located in Northeast China – a pioneering region of China's industrialization built even before the People's Republic of China was founded. They have a sound higher education sector resulting from long-term central government investment, but commonly suffer from shortages of continuing funding because of the decline in the central government contribution, poor economic performance and, consequently, lack of financial support at the local level. As a result, the potential for higher education development will continue to be limited in the near future.

The regional classification of higher education development could account for the uneven economic development between the eastern coastal region and inland China and its impacts, which can be seen from Zone III. In particular, it offers a way to observe imbalance or disharmony between local economic and higher education development, which is highlighted by Zone II. In addition, historic factors have profoundly influenced higher education development and division. First, the advanced position of the three municipalities: Beijing, Shanghai and Tianjin in Zone I can be traced back to the Republic of China (1911 to 1949) when the Guomingdang government established many famous universities (e.g. Peking, Qinghua, Fudan, Tongjing and Nankai) in these cities and which still lead China's higher education development. Secondly, the sound base of higher education development in Zone IV is closely related to the planned economy of the 1950s and 1960s when the establishment and development of higher education institutions were an important part of the national industrialization strategy. As a result, institutions were established in the north-east and central provinces including, Shaanxi, Hubei, Liaoning, Jilin and Heilongjiang. Finally, the 'Cold War' atmosphere and the possibility of renewed civil war against the Guomindang government in Taiwan between the 1950s and the 1970s, not only restricted the development of higher education in coastal provinces – it was also responsible for the movement of many institutions from coastal cities to inland provinces such as Shaanxi and Sichuan during that period.

Uneven higher education development cannot be avoided, because of the many complex factors at play. However, the consequences for social justice should not be underestimated. For instance, potential students from Beijing, Shanghai and Jiangsu are advantaged in that they can enter universities more easily or have a better opportunity to enter a higher quality university. This is in contrast with students from Henan, Zhejiang, Shandong and Guangdong provinces, where the benchmark for higher education entrance is greater and the entrance opportunity lower compared with other regions.

Conclusions

Taking into account the increasing gap and inequality in local economic development in China, this chapter has shown something of the progress and consequence of the regionalization of the higher education sector in general; and, in particular, the impact of the co-funding system, which replaced the former centralized system of funding. Through a systematic collection and analysis of official statistics at the provincial level, a conceptual framework has emerged to measure and analyse two groups of variables: higher education development status and potential. What are our conclusions?

First, higher education reform based upon the principles of decentralization and the co-funding system has had a profound impact on the direction, location and redistribution of resources (see also Chapter 5). Since 1998, a new regional division has emerged which places China's provinces into four zones: Zone I) High development status and potential zone in three municipalities (Beijing, Shanghai and Tianjing) and a coastal province (Jingsu), which will continue to lead higher education development; Zone II) High development potential but low development status in four coastal provinces (Zhejiang, Guangdong, Fujian and Shangdong) and two inland provinces (Henan and Ningxia), which have shown strong demand for higher education as well as for local funding capacity; Zone III) High development status but low potential in the northeast region and in two inland provinces (Shaanxi and Hubei), which shows the constraint of local financial conditions on higher education development; IV) Low development status and potential in the rest of China which includes more than half of the provinces, of which most are located in western China. This is different to Zones II and III; Higher education development in Zone IV will be confronted with double constraints of both lack of resources and local financial conditions for a considerable period.

Secondly, regional gaps and divisions of higher education development are caused not merely by the co-funding system, but are also related to other factors, including regional distribution and the funding allocations to the higher education sector historically, and also central government's financial commitment (as in the cases of Tibet and Xingxia). It would be too simple to apply a standardized co-funding formula to all provinces without further distinguishing among regional differences that are related to such other factors, including: history, local culture and economic development. The framework developed in this chapter offers an insight into the necessity and feasibility of such regional divisions.

Thirdly, the regional gaps in higher education development require a novel approach to funding policies based upon regional rather than provincial divisions. Instead of the 'one size fits all' policy for all the provinces, it is argued that provinces in different regions should take on different policies in terms of establishing new higher education institutions, setting tuition fees and determining the proportion of funding between central and local governments. In particular, at the central government level, special attention should be paid to Zone II in order to accelerate higher education development via special policies and financial support measures.

Nonetheless, it is also urgent to call for new policies for development in Zone IV through increasing central government funding or encouraging transfers of resources from Zone IV to Zone II.

Fourthly, it seems unfair and also inefficient practice for the central government funding to be concentrated on a few municipalities, such as Zone I. This is particularly true for Beijing and Shanghai, which have been over-developed, compared with their counterparts nation-wide. They have received a higher proportion of central government funding without, however, necessarily witnessing a higher quality of outcome in research and teaching. It would be beneficial for China's national higher education development if central government funding could be reallocated from these municipalities to other regions, in particular to Zones II or IV.

Notes

1 To simplify we used 'provinces' to cover four municipalities, Beijing, Shanghai, Tianjing, Chongqing, and five ethnic regions including Tibet, Xingjiang, Inner Mongolia, Ningxia and Guangxi.
2 As private or non-public HE is still in its early stages with a small share of HE students and out of government funding and funding control, it is not discussed in this chapter. However, see Chapter 4.

References

Bai, L. (2006), 'Graduate unemployment: dilemmas and challenges in China's move to mass higher education', *China Quarterly*, 185: 128–144.

China Education Fund Statistical Yearbook, various years, Beijing: China Statistics Press.

China Education Statistics Yearbook, various years, Beijing: China Statistics Press.

China Statistics Yearbook, various years, Beijing: China Statistics Press.

Li, F., Morgan, W.J. and Ding, X. (2008), 'The expansion of higher education, employment and over-education in China', *International Journal of Educational Development*, 28: 687–697.

Li, J. (2007), 'Statistical analysis of the regional HE development standard in China', *Journal of Shanxi University of Finance and Economics*, 10 (4) (in Chinese).

Wu, B. and Zheng, Y. (2008), 'Expansion of higher education in China: challenges and implications', *CPI China Briefing Series*, Issue 36. Online at http://www.nottingham.ac.uk/cpi/publications/policy_paper_series_2008.php.

Yao, S., Wu, B. and Su, F. (2008), 'Impact of higher education expansion and social justice in China: a spatial and inter-temporal analysis', *CPI Discussion Papers*, 34. Online at http://www.nottingham.ac.uk/cpi/publications/discussion_papers_2008.php.

Zhang, L. and Feng, Z. (2006), 'Analysis of diversity of HE resources allocation by region', *Higher Education Development and Evaluation*, 22 (4) (in Chinese).

Zhang, W. (2005), 'On harmonized development of higher education in China', *Journal of Northwest University*, 35 (4) (in Chinese).

Appendix

Annex 1.1 Indicators of HE development

Table 1A.1 Selected indicators of HE development by province (2007)

Province	*X1: HE student enrolment*	*X2: Post-graduate enrolment*	*X3: HEIs*	*X4: Key HEIs to total HEIs*	*X5: GDP*	*X6: Finance revenue*	*X7: HE budget*	*X8: HE budget to total exp*
	Per 10K	*Per 10K*	*Per million*	*Ratio*	*Yuan/p*	*Yuan/p*	*Yuan/p*	*Ratio*
Beijing	682.6	154.47	6.84	21.50	58,204	12,302.32	21,431.73	19.16
Tianjing	460	31.90	4.13	2.80	46,122	5,634.87	9,183.86	16.89
Hebei	171.2	3.27	1.27	0.93	19,877	1,136.57	3,332.89	20.09
Shanxi	186.3	4.89	1.74	0.93	16,945	1,762.34	4,669.9	18.02
I Mongolia	150.7	4.11	1.54	0.93	25,393	2,047.15	5,017.39	14.75
Liaoning	249.8	15.66	1.81	3.74	25,729	2,519.06	5,137.44	16.72
Jilin	249.3	15.08	1.61	2.80	19,383	1,189.46	5,457.51	17.5
Heilongjiang	220.7	12.06	1.78	3.74	18,478	1,151.86	5,720.07	16.55
Shanghai	431.7	66.55	4.35	9.35	66,367	15,044.89	12,453.98	14.59
Jiangsu	254.2	12.73	1.59	10.28	33,928	2,949.43	6,135.33	19.87
Zhejiang	224.6	6.21	1.48	0.93	37,411	3,259.88	7,413.99	22.79
Anhui	148.5	7.85	1.33	2.80	12,045	1,518.29	2,852.95	19.26
Fujian	178.8	7.14	2.07	1.87	25,908	1,953.25	5,047.15	23.8
Jiangxi	211.1	3.13	1.51	0.93	12,633	892.43	3,301.15	20.3
Shandong	191.7	4.99	1.19	2.80	27,807	1,788.62	4,587.12	20.26
Henan	145.5	2.20	0.83	0.93	16,012	873.52	4,079.66	21.73
Hubei	268.3	12.41	1.42	6.54	16,206	972.59	3,125.25	17.5
Hunan	183.8	6.36	1.45	3.74	14,492	891.24	3,393.51	19.23
Guangdong	171.8	6.67	1.34	3.74	33,151	3,415.62	10,597.39	20.88
Guangxi	127.3	3.17	1.17	0.93	12,555	878.42	5,207.31	20.35
Hainan	160.2	2.22	1.69	0.00	14,555	1,281.54	4,283.76	20.51
Chongqin	204.3	9.94	1.17	1.87	14,660	1,368.33	4,418.34	19.1
Sichuan	150	6.92	0.86	4.67	12,893	965.22	3,209.97	19.37
Guizhou	90.4	2.11	0.93	0.93	69,15	717.25	4,961.03	20.53
Yunan	108.1	4.29	1.13	0.93	10,540	1,078.22	4,958.68	19.16
Tibet	117.4	1.68	2.19	0.00	12,109	736.14	11,407.18	14.74
Shaanxi	268.3	18.86	2.03	7.48	14,607	1,267.98	3,916.46	17.13
Gansu	154.8	7.64	1.30	0.93	10,346	729.50	5,073.55	19.72
Qinghai	93	2.54	1.49	0.00	14,257	1,027.36	7,737.03	14.22
Ningxia	151.8	3.53	2.13	0.00	14,649	1,311.43	8,247.95	21.68
Xingjiang	141.4	4.59	1.53	0.93	16,999	1,364.36	4,781.39	19.06

Sources: China Statistics Yearbook, 2008; *China Education Statistics Yearbook*, 2008; *China Education Funds Statistical Yearbook*, 2008.

Annex 1.2 Methodological notes for statistical modelling

Based upon a systematic collection of provincial HE sector as well as demographic, economic and social indicators, a factor analysis has been adopted to search and identify key factors that determine either HE development status or development potential. Below are procedures in selecting and determining key factors.

Annex 1.2.1 Explanation of HE development level of total variance

Table 1A.2 Total variance explained (I)

Total variance explained

	Initial eigenvalues			*Extraction sums of squared loadings*		
Component	*Total*	*% of variance*	*Cumulative %*	*Total*	*% of variance*	*Cumulative %*
1	3.603	90.076	90.076	3.603	90.076	90.076
2	.268	6.709	96.785			
3	.095	2.379	99.164			
4	.033	.836	100.000			

Extraction Method: Principal Component Analysis.

$$Fac1\_1 = 0.963\ X1 + 0.979\ X2 + 0.943\ X3 + 0.910X4.$$

Overall score expression of higher education development level:

$$Fac\_1 = 0.90076\ Fac1\_1.$$

Annex 1.2.2 Total variance of HE development potential

Table 1A.3 Total variance explained (II)

Total variance explained

	Initial eigenvalues			*Extraction sums of squared loadings*			*Rotation sums of squared loadings*		
Component	*Total*	*% of variance*	*Cumulative %*	*Total*	*% of variance*	*Cumulative %*	*Total*	*% of variance*	*Cumulative %*
1	2.677	66.930	66.930	2.677	66.930	66.9303	2.594	64.856	64.856
2	.939	23.476	90.406	.939	23.476	90.406	1.022	25.550	90.406
3	.313	7.837	98.243						
4	.070	1.757	100.000						

Extraction Method: Principal Component Analysis.

$$Fac1\_2 = 0.949\ X5 + 0.957\ X6 + 0.876\ X7 - 0.103\ X8$$

$$Fac2\_2 = -0.039\ X5 - 0.134\ X6 - 0.118\ X7 + 0.994\ X8.$$

Overall score, expression of higher education development potential:

$$Fac\_2 = 0.6485\ Fac1 - 2 + 0.25555\ Fac2\_2.$$

2 Adult higher education in China

Problems and potential

Naixia Wang

Introduction

Over the last decade, China's higher education (HE, *Gaodeng Jiaoyu*) has experienced a massive expansion. The policy and objectives of expanding HE enrolment were stated in the 1998 *Action Scheme for Invigorating Education towards the Twenty-first Century* (ASIE). According to this document, the Chinese government planned an enrolment increase to 11 per cent of the appropriate age cohort in 2000, and 15 per cent by 2010, which is the internationally acknowledged threshold of mass HE.

Thus the year 1999 witnessed a significant increase in new enrolment to 1.59 million from 1.08 million in 1998 – a 47.2 per cent increase in a single year. This rapid expansion continued until 2003. Total enrolment in HE went through a nearly four-fold increase in six years, from 3.6 million in 1998 to 14.2 million in 2004. In short, the period 1998–2003 witnessed an unprecedented expansion in Chinese HE. However, the tremendous increase of student numbers in such a short time has also given rise to many problems (Zhou, 2002). As Levin and Xu (2005) stated, the potential of such an expansion might have been largely exhausted. Instead, quality issues, especially quality inputs, have now become the main concern (Min, 2001).

Meanwhile, adult higher education (AHE, *Chengren Gaodeng Jiaoyu*), an important, yet often over-looked part of Chinese HE, has also been expanding since the late 1990s. According to the Ministry of Education (1999), the AHE enrolment increased by 100,000 in 1999, with the total enrolment that year being one million. In the next four years, the enrolment was 1.59 million in 2000, 1.84 million in 2001, 2.42 million in 2002, and 2.9 million in 2003, respectively. The rapid increase in AHE enrolments has followed the increasing demand for HE, but likewise it is associated also with problems.

It should be noted that most of the existing research on China's HE focuses on, what may be described as conventional or regular HE (*Putong Gaodeng Jiaoyu*), with relatively little information available or analysis about Chinese AHE. The purpose of this chapter is to examine the provision of AHE at Chinese universities. It does this through a detailed case study of quality assurance and the status of AHE programmes in universities in the northern city of Taiyuan, Shanxi province.

The chapter begins with a description of China's AHE – its definition and development and its programmes. It then discusses the information presented using the analytical framework of lifelong learning in the context of government policies. The next part gives a short account of the methodology and methods employed in conducting the case study. Finally, the chapter presents findings and sets out conclusions that have policy implications for Chinese HE generally.

Definition and background

The system of Chinese AHE is a very important part of the national educational system. It plays a significant role in training employed personnel, enhancing the quality of current workers, and scientists, as well as of government officials and industrial management. The goal of AHE is to accelerate the development of the economy and adapt new technologies.

The definition given in Titmus's *Lifelong Education for Adults: an International Handbook*, a standard text, is that:

> Adult higher education is a high-level adult education. It is an important component of the higher education and adult education in China. It is provided for adults both at work and not at work, who satisfy the entry requirements of adult higher education, aiming to meet their ever-increasing educational demand and improve their qualities.
>
> Titmus, 1989: 152

Adult HE is bound up with social and economic development and the advance of science and technology. The scope and speed of the development of adult HE should eventually match the increasing demand of society.

Since the People's Republic of China was founded in 1949, the tasks of Chinese adult education have developed from eliminating illiteracy to providing elementary and intermediate level training, and HE. The 17-year period (1949–1966), from the early days of Liberation to the beginning of the Cultural Revolution, was the initial stage of AHE in communist China. At that time, the scope of AHE was rather limited because of the backwardness of economic development, science and technology, and cultural lag. Adult HE enrolled 4,100 students in 1952, only 2.1 per cent of the enrolment of the full-time regular HE in the same year. The State was badly in need of a large number of professional people in the wake of the implementation of the first five-year plan. It was impossible for the regular HE institutions (HEIs, *Putong Gaodeng Yuanxiao*) to prepare such professionals. This situation gave a great impetus to the development of AHE in China. The enrolment of AHE increased to 76,000 in 1957, 17.5 times that of 1952, and accounted for 17 per cent of that of the regular HE in the same year. Adult HE developed together with the economy during the second and third five-year plan periods. The enrolment of adult HE averaged 415,000 students a year between 1958 and 1965; the average number was twelve times that of the 1953–1957 period, and equivalent to 50 per cent of the enrolment in regular HE. In 1965, the

total number of adult HEIs was 964; and the total number of adult HE staff members was 8,493.

The decade-long Cultural Revolution (1966–1976) had a profound impact on Chinese education, including AHE. By 1972, with up to 80 per cent of adult HEIs closed, only 195 were left functioning. Inevitably, the quality of AHE also deteriorated. After the Cultural Revolution, Deng Xiaoping gave a series of important speeches on education: first at the Forum on Work in Science and Education (8 August 1977); then at the Opening Ceremony of the National Conference on Science (18 March 1978); and at the national Conference on Education (22 April 1978). These speeches pointed the direction for the development of science and education, including AHE, in China. Chinese AHE was put on track again towards a steady and healthy development.

'Education should be geared toward modernization, the world, and the future,' proclaimed Deng Xiaoping, as he launched China's drive for economic development and modernization. He stated that: '… the key to achieving modernization is the development of science and technology. And unless we pay special attention to education, it will be impossible to develop science and technology…. we must have knowledge and trained personnel' (1977). In this plan, Chinese education would no longer serve the ideology of 'proletarian politics', but would become the engine for building China into a powerful and modern nation. In regard to HE, Deng pointed out that: '… education still has to walk on two legs. In HE, colleges and universities constitute one leg, while work–study universities constitute the other.' (1977).

After the Third Plenary Session of the Eleventh Conference of the Chinese Communist Party (18–22 December 1978), especially after the *Decision to Strengthen Workers' Education* was announced by the Party's Central Committee and the State Council on 20 February 1981, the role of adult HE was further recognized. Since then, it has developed very quickly. A multi-level, multi-standard, and multi-form adult HE system has gradually been established.

Programmes of adult higher education

These include academic qualifications (*xueli*) and non-academic qualifications (*fei xueli*) programmes, with the former being the mainstream. Academic qualification via adult education is carried out exclusively by HEIs and specifically adult HEIs (*Chengren Gaodeng Yuanxiao*), which have been approved by the Ministry of Education to grant AHE academic qualifications. Therefore, HEIs, offering both day and evening university programmes and correspondence education programmes, and adult HEIs (see Table 2.1) are the providers of AHE academic qualification education. The focus of this chapter, as indicated earlier, is on the former; that is, on AHE programmes provided by universities.

Adult HE academic qualifications are awarded upon the successful completion of the required courses. A bachelor's degree is awarded to those who satisfy the relevant degree requirements. The teaching methods include full-time classroom teaching, long-distance instruction for self-taught students by providing teaching

Table 2.1 The higher education system in China (2002)

Type of institution	*No. of institutions*	*No. of students*
Regular education institutions	728	501,000
Graduate programs at universities	408	473,500
Graduate programs at research institutions	320	27,500
Undergraduate education institutions	3,205	14,625,200
Regular higher education institutions	1,396	9,033,600
Universities	629	6,575,400
Short-cycle colleges	767	2,458,200
Adult higher education institutions	607	5,591,600
Radio/TV universities	45	385,100
Workers' colleges	357	367,300
Peasants' colleges	3	100
Management training colleges	97	155,500
Educational colleges	103	326,400
Correspondence colleges	2	10,000
Others		16,400
University-run adult higher education programs		4,329,800
Private higher education institutions	1,202	1,403,500

materials, and audio and video and on-line materials. The study methods include full-time (*quan tuochan*), and spare-time (*yeyu*) methods.

The concept of lifelong learning

The concept has had an international currency for a number of decades (OECD, 1973). According to John Dewey, education is one of the major foundations of a rich life, but it is a foundation that can be laid and especially developed at any stage of life. Consequently:

> It is common place to say that education should not cease when one leaves initial formal schooling. The point of this common place is that the purpose of schooling should be to ensure the continuance of education by developing the powers that ensure the capacity for further development autonomously. The inclination to learn from life itself and to make the condition of life such that all will learn in the process of living is the finest product of schooling.
>
> Dewey 1916: 51

Dewey continues:

> Since life means growth, a living creature lives as truly and positively at one stage as at another, with the same intrinsic fullness and the same absolute

> claims. Hence education means the enterprise of supplying the conditions which insure growth, or adequacy of life, irrespective of age.
>
> Dewey, 1916: 51

In *Lifelong Education*, the first book explicitly devoted to the concept, Yeaxlee claimed that: '… the case for lifelong education rests ultimately upon the nature and needs of the human personality in such a way that no individual can rightly be regarded as outside its scope, the social reasons for fostering it are as powerful as the personal' (Yeaxlee, 1929: 31).

However, it was only after the Second World War, and indeed since the late 1960s, that the concepts of lifelong education and lifelong learning were considered widely. The *Faure Report: Learning to Be* (UNESCO, 1972), which according to Maheu (1973) was a turning point in the development of education, advocated that education should be both universal and lifelong, claiming that education precedes economic development and prepares each person for a society that does not exist but which may do so within their lifetime. The *Report* emphasized that lifelong education should be at the basis of educational policy. Thus, lifelong education was considered as a philosophical principle with respect to the organization of education (Tuijnman and Boström, 2002).

R. H. Dave (1976) defined the concept of lifelong education broadly, justifying its wide scope as a means to make it applicable for different contexts and cultures: lifelong education is a process of accomplishing personal, social and professional development throughout the life-span of individuals in order to enhance the quality of life of both individuals and their collectives. According to him, lifelong education includes formal, non-formal and informal patterns of learning throughout the life cycle of an individual for the conscious and continuous enhancement of the quality of life, his own and that of society. This, as Medel-Añonuevo *et al.* (2001: 3) concluded, means: '… a perspective that treats education in its totality as it encompassed and unified all stages and forms of education. As the precursor of lifelong learning, lifelong education was conceived as a holistic and integrated strategy that was directed toward the fulfilment of adaptive and creative functions of the individuals leading to the continuous improvement of the quality of personal and collective life.'

The shift from lifelong education to lifelong learning proved to be not only semantic but also substantive: lifelong education in the early seventies was associated with the more comprehensive and integrated goal of developing more humane individuals and communities, while in the 1990s the more dominant interpretation of lifelong learning was linked to re-training and learning new skills that would enable individuals to cope with the demands of the rapidly changing workplace (Medel-Añonuevo *et al.*, 2001). Lifelong learning has become more individual-oriented. Its framework, therefore, implies that the individual is at the heart of a lifelong learning 'system', and the realization of lifelong learning depends to a large degree on the capacity and motivation of individuals to take care of their own learning (Tuijnman and Boström, 2002).

Chinese perspectives on lifelong learning

Lifelong learning is a concept that is familiar to the Chinese. There are many well-known Chinese proverbs, which for thousands of years have encouraged lifelong learning. Among them the most familiar are: 'To learn as long as to live (*Huo dao lao, xue dao lao*)', 'Learning has no boundaries (*Xue hai wu ya*)' and 'There is no end to learning (*Xue wu zhi jing*)'. The notions implied in these three proverbs incorporate a variety of lifelong learning related terms such as lifetime learning, life-wide learning and lifespan learning. The central theme is that learning should continue as long as a person lives.

In comparison with the Western approaches to lifelong learning, Confucian educational philosophy through the ideal human model of the *Sage* (a *Sage* is the one who realizes humanity and morality, representing the highest realm that human beings may reach) and the realistic educational end *Jun Zi* refers to the model of morality and the exemplar of the educated, synonymous with a person of humanity and of outstanding knowledge to realize such humanity in practice. This gives holistic and multi-dimensional goals and functions for human beings to realize. Confucius' goals, as Sun (2008) argues, included these but also went beyond the purposes advocated by each stage of the development of lifelong learning, whether humanistic for holistic development, pragmatic, or utilitarian for dealing with economic crisis. The model of Confucian *Jun Zi* is that learning happens at every stage of an individual's life span (lifelong learning) and every aspect of social life (life-wide learning) is involved (Rogers, 2006; Schuetze, 2007). It places the individual learner at the centre of learning, which consciously and constantly transforms learners, connects them to, and serves self, family, society, and universe without missing any parts of the development of wholeness (Sun, 2004).

The Chinese government's regulations on lifelong learning

Since the 1990s, to satisfy the demand for competent workers and specialized talents in various fields, the Chinese government has attached importance to the development of adult HE and has developed a series of policies to promote life-long learning through adult education. These may be found:

- In the *Decision on the further reform and development of HE for adults* (issued in January 1993), where it is put forward that: '… various social forces should be mobilized to support and promote the development of various forms of HE for adults at different levels, and to further strengthen and enlarge the opportunities and channels for all citizens to receive HE'.
- In the *Outline for the reform and development of education in China* (issued in February 1993), where it is stated that adult education, as a new type of education, is to develop traditional school education into lifelong education, and that energetic efforts have to be made to develop vocational and adult education at various levels.

- In *The Education Law* of the People's Republic of China (adopted in March, 1995), which emphasized that: 'The State encourages the development of different forms of adult education so as to enable all citizens to receive appropriate professional and lifelong education in the fields of politics, economics, culture, science and technology … The government will enhance educational innovation, boost the harmonization of development of all levels of education, build and perfect the lifelong learning education system to fulfil the needs of socialist market economy development'.

Furthermore, the Chinese government has also adopted a series of other important documents. The 1998 *Action Scheme for Invigorating Education towards the Twenty-first Century* is, for instance, one of them.

At the Third National Working Conference on Education on 15 June 1999, Jiang Zeming, the then Chinese president, stated that:

> Lifelong learning is an inevitable trend of modern society. Non-recurring schooling can no longer fulfil people's needs for new knowledge. We should progressively establish an educational system, which can benefit lifelong learning. Schools should further open to the public by performing their functions through formal education and informal education, continuing education and professional training. We should provide more educational opportunities by strengthening the interplay of general education, vocational education, adult education and HE. We should offer multi-level and varied educational services to people from all walks of life by relying on the establishment of the network of distance learning and form a nationwide educational system … and China should become a nation where everybody can have access to education.
>
> Jiang, 1999

At the APEC Human Resource Development forum, Jiang (2001) put forward his 'five propositions of human resource development.' One of these was to 'construct a lifelong education system, create a learning society'. In the Report of the 16th National Congress of the Communist Party of China (National Congress of Communist Party of China [NCCPC] 2002), the aim 'to form a lifelong learning and learning for all society, promote people's overall development' was written into the Communist Party's official document.

In order to form the 'lifelong education system', the Central Council of Communist Party of China (CCCPC) and the State Council held the first National Talents Conference in December 2003. Here 'talents' referred to those who were able to be creative and innovative, making contributions to economic, social and cultural development in society. It deconstructed the traditional concept of talents that stressed academic credentials. At the conference the central government advocated the strategy of 'invigorating China through talents', aiming at 'transforming the huge population pressure into abundant human resource' (Central Council of Communist Party of China and State Council 2003). By 'invigorating

China through science and education', it has become the fundamental guideline of constructing a learning society in China.

Lifelong learning and Chinese universities

Globalization is a major theme in today's world. It is fundamentally an economic phenomenon the effects of which spread from the West throughout the whole of global society. As part of this process, *knowledge* creation and acquisition becomes one of the driving forces of the global competitive market. As knowledge has traditionally been the province of universities, it is therefore not surprising that they are adapting to the idea of lifelong learning and that the adult work force is obliged to continue its education, and:

> …as more knowledge-based occupations locate in a country, the greater is the demand for more places to be created in universities for young people to gain qualifications before they enter the workforce. In addition, there is also more demand on the universities to make undergraduate education available to those people who are already in employment but who need to upgrade their knowledge.… Pressures are now being placed upon universities … thus allowing an increased number of people opportunities to gain their undergraduate degrees later in life…
>
> Jarvis, 1999: 252–253

However, the task of lifelong learning fulfilled by universities turns out to be more arduous in China than in developed countries. According to Xu (2001), in developed countries, many skilled personnel in all kinds of enterprises play an important role in technological innovations, whereas China is far behind in this respect. For example, in 1995, less than 40 per cent of some 23,000 medium and large-scale enterprises had the capacity to develop technology and there was generally no such capacity in medium and small-scale enterprises, which made up 99 per cent of all firms. Hence: '… universities are placed in the fore-front to be the source of technological innovation, and also the primary base for lifelong learning' (Xu, 2001: 320).

The next section considers the provision of university AHE in China according to the following criteria: curriculum content, modes of delivery, quality assurance procedures and access policies.

Adult higher education in Taiyuan

The chapter provides a case study of Taiyuan, a city in the northern Chinese province of Shanxi. Ever since the establishment of the People's Republic of China (PRC) in 1949, Shanxi has been central to its development both economically and politically (Goodman, 2002). It is a major national centre of heavy industry dominated by large-scale state-owned enterprises (SOE). As the capital of Shanxi Province, Taiyuan is the political, economic, cultural and educational centre. The

economic reforms of recent years have brought great changes in people's lives in Shanxi. From late 1997 onwards the central government moved forward with aggressive restructuring of state owned enterprises (SOEs), which had made redundant a quarter or more of workers between 1997 and 2000. As Figure 2.1 shows, the number of such employees in Shanxi had dropped considerably by 2000. By the end of 2004, there were 215,000 redundant workers, including 170,000 from SOEs, in Shanxi (Shanxi Provincial People's Government 2005); and 44,100 redundant workers in the city of Taiyuan (Taiyuan Municipality 2005). Consequently, the labour market reforms have both given room for and provided incentives for individual investment in AHE.

The case study used a mixed methodology, which gave a fuller picture of the issues under investigation. Purposeful sampling was employed in selecting the study sites. Lincoln and Guba (1985: 202) state: '… in purposeful sampling the size of the sample is determined by informational consideration.' Thus three universities were selected for their typicality (Cohen *et al.*, 2000: 103; de Vaus, 2002: 90).

University A is the only comprehensive university in Shanxi. Founded early last century, the university was then a state-sponsored university in China. It is now one of the key universities in the province, and is jointly sponsored by Shanxi provincial government and the Ministry of Education (MoE). The university has 22 schools and departments, offering a wide range of degree, diploma and certificate courses. It currently has about 20,000 students, including undergraduates and postgraduates. The College of Adult Education (CAE) of University A was founded in 1984. But before that, the university once provided correspondence programmes for adult learners for just two years between 1955 and 1957. The CAE of the university is the administrative department in charge of adult diploma and non-diploma education. The former includes degree programmes for junior

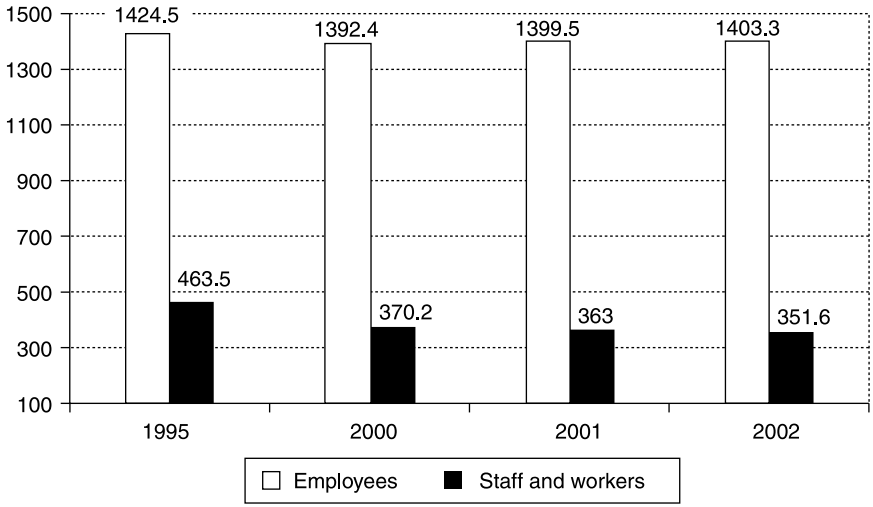

Figure 2.1 Number of employees, staff and workers in Shanxi (unit = 10,000 persons).

college graduates and high school graduates, and non-degree programmes for school graduates; the latter includes professional training programmes rewarding achievement at Certificate level. The college currently has about 10,000 students.

University B was once part of University A. In the early 1950s, it became independent. It is now a multidisciplinary university of high reputation in Shanxi and in the country, focusing on engineering, combined with science, and additionally promoting well-coordinated development of humanities, management, economics, law, physical education and fine arts. Like University A, it is also one of the key universities in the province, and is also jointly sponsored by Shanxi provincial government and the Ministry of Education (MoE). The university has 13 schools and departments, offering a wide range of degree, diploma and certificate courses. It currently has about 15,000 students, including undergraduates and postgraduates. University B started providing adult education programmes in 1956, long before the College of Adult Education (CAE) of the university was formally established and named in 1998. Like the CAE of University A, it is also the administrative department in charge of adult diploma and non-diploma education. The former includes degree programmes for junior college graduates and high school graduates, and non-degree programmes for school graduates; the latter includes professional training programmes rewarding achievement at certificate level. The college had about 15,000 students in 2002.

University C, founded in 1951, is a multidisciplinary university, with theoretical economics as its foundation, together with applied economics and management promoting the co-ordinated development of economics, management, law, humanities and science. Like the above two universities, it is jointly sponsored by Shanxi provincial government and the Ministry of Education (MoE). The university has 22 schools and departments, offering a wide range of degree, diploma and certificate courses. It currently has about 12,700 students, including undergraduates and postgraduates. The College of Continuing Education (CCE) of University C is the administrative department in charge of adult diploma and non-diploma education. The former includes degree programmes for junior college graduates and high school graduates, and a non-degree programme for school graduates; the latter includes professional training programmes rewarding achievement at Certificate level. The college currently has about 11,000 students.

A questionnaire for AHE on-course students was used. About 76 per cent of the on-course students were employed, while the rest were school leavers. Their average age was 25.9 years, and the range was 18–43 years. Among them, 37.5 per cent were professionals, 8.4 per cent administrators (government, business and firms); nearly 30 per cent were clerks or skilled workers. 53.8 per cent were without professional titles. Interviews with AHE students were also conducted after the questionnaire, which added depth and breadth to the research. Other interviews took place with directors and lecturers of the colleges of adult education or of continuing education of each of the three universities.

What were the findings?

First, I shall consider the *content of curricula*. The statistics show that the majority (66.9 per cent) of the on-course students didn't think that courses met the needs of the market and that the content of curricula was variable, practical and multi-faceted. Only a small number (9.5 per cent) thought so. Over 10 per cent thought that the curriculum was poorly designed and that the content was completely outdated. It was widely agreed among students and lecturers that courses didn't respond well to the needs of learners, and that the content did not develop practical knowledge. A student said:

> As I am working full-time, I'm doing part-time AHE courses, so I know quite clearly what is really needed in my work, and I'm therefore very keen to learn those things. However, I have found that they were not even mentioned in lectures at all. Moreover, from our work, we have more or less learned something about the latest developments in this area. We are students, and we even know about it. Unfortunately, some of the lecturers who are teaching these courses know nothing about it, let alone is it introduced to students in their lectures (on-course student). Most of the students think that what they learn in class is not relevant to their work.

Another student commented:

> Adult higher education is the education for adults anyway, so it should be different from regular higher education.… Most of us are working people, and practical knowledge is therefore very important to us, as it is most needed in our work. We hope to learn what is more relevant to our work, and hope to acquire competences which will help us to find solutions to problems we encounter in our working life. Unfortunately, what I have learned here is not quite relevant to my work and is not quite useful.

Students and lecturers hold the view that the content of curricular is very similar to that of regular HE. A lecturer said:

> Yes, I do think that the current practice of adult higher education is, to a great extent, limited to imitating regular higher education, in the respect of curriculum and course design, selection of course books, etc. Consequently, theoretical rather than applied or practical knowledge is emphasized. I guess everywhere else is the same, and there is no exception here.

Both members of staff and students also think that AHE undergraduate courses should be restructured to reflect changes in knowledge and technology, as in the twenty-first century 'new knowledge' is very rapidly becoming obsolete. A lecturer commented:

> At this university, most of the courses keep using the same course books for many years. We can't choose which course book to be used for the course we teach – we are told which one to use. The core AHE courses here have to use the national unified course books … In the information society knowledge becomes outdated in some disciplines than in the others. This is clear in the applied side of sciences and in technology as compared to the humanities, for instance … But we can't change course books if it is not approved by the authorities.

Secondly, I will consider *teaching and learning*. One feature of lifelong learning is that appropriate forms of teaching and learning are developed to enable and motivate learners to learn autonomously. Special forms or styles of teaching support the ability to do this, especially by taking the learners' lives and work experiences into account.

But what is shown in this case study is that no interactive teaching and learning was taking place in AHE courses. When the on-course students were asked 'which of the following describes the teaching form, *Spoon-feeding* or *Interactive*', the statistics show that as much as 73.3 per cent chose 'spoon-feeding.' The interviews also showed that 'spoon-feeding' was widely used, as lecturers wished to achieve good examination results. Both teaching and learning are 'examination-oriented', as the following quote from an on-course student indicates:

> When we have lectures, lecturers simply read off their prepared notes 'wholesale', without giving any further explanations … and normally we are just told to underline the key points in our course books and to learn them by heart, for exams. We are given loads of exercises to do both in and after class, for better exam results. So both teaching and learning are exam-oriented. Students take notes in class, learn notes by heart after class, and throw notes in the bin after exams … Well, the teaching style is 100 per cent spoon-feeding and exam-oriented.

Students strongly suggested that teaching methodology needs improving. As an on-course student commented:

> Some of our teachers talk non-stop without breaks, through the whole session. When they talk, they talk as if reciting text to themselves. So there is no interaction and communication between teacher and learner in class. Such teaching will not help to develop creativity of students at all. Teaching methods must be changed and improved, to make sure they are suitable for learners.

But the interviews with lecturers showed that 'exam-oriented' teaching was inevitable. According to them, students all want to pass the exams in order to get the diploma or the degree at the end – '… that's what they are there for!' The 'empty pursuit of degrees' (Arnstein, 1982: 162) is the main motivation of

most AHE participants (Wang and Morgan, 2009). This is due to the fact that promotion in almost all government agencies and public organizations, and state enterprises in China, is based on one's educational qualifications. For example, for senior professional titles, the candidate should at least have a diploma of HE, or an undergraduate degree. Adult HE provides academic qualification programmes and meets the needs of such candidates who desperately need the required qualifications.

Thirdly, I will consider *quality of provision*. The statistics show that 59.4 per cent of the on-course students thought that the quality of AHE provision was 'just OK'. About 22.3 per cent thought that it was good. However, 18.3 per cent thought that it was poor.

The interviews showed their opinions more specifically. Most held the view that quality was being sacrificed for quantity during the rapid HE and AHE expansion. Although the development boom of AHE has provided more people with opportunities for HE, it also strains the resources both in regular HEIs and adult HEIs, when administration, teaching faculties and physical facilities fail to be improved accordingly. As a student commented:

> Teaching facilities for AHE are quite old. The computers we use for our courses are all quite old. Our courses are charged more than others, as we were told we had more lab hours, that is, 'hands-on' training in the computer room. The poor facilities here are very disappointing.

The interviews with the students also showed that AHE is marginalized compared with regular HE. The Colleges of Adult Education and the Colleges of Continuing Education are more interested in pursuing profit than providing good quality teaching and service. As a student commented:

> I think that this university is not treating regular HE students and AHE students the same way, they are No.1 and we are No.2. They definitely have priority over us. Although we are students of the same university, we as AHE students find ourselves marginalized. We are served differently. I don't think that it should be like this. Take doing experiments for example. They can use labs for experiments, but we can't, which definitely affect teaching and learning.

AHE programmes have become a main source of income for universities. As a student observed:

> When they recruit new students, universities always claim that they employ the best, the most experienced lecturers to teach the courses. But we then find that it is not true. There is no learning support. Services are not good enough … Nowadays a public opinion holds that universities regard AHE as their main source of income, their 'cash cow'. They care about profit, but not quality, the quality of the education they provide.

However, the Director of the College of Adult Education at one university painted a different picture. He said:

> The AHE programmes we provide are quite popular. I should say that it is mainly because this university has got a very good reputation within the province and also in the city. So the diplomas and degrees obtained from this university have better value in the labour market … I think the quality of our programmes is highly recognized in Taiyuan.

Finally, I will consider *quality assurance*. In 2002, on the basis of earlier informal evaluation regulations, the Ministry of Education (MoE) initiated the Project of Quality Assessment of Undergraduate Education, and a new organization, Higher Education Evaluation Centre (HEEC) of the Ministry of Education, was established to assess HE teaching quality. All HE institutions are to be evaluated within a period of five years on a rolling basis. As an important component of Chinese HE, university AHE programmes are also evaluated. The AHE programmes provided by the three selected universities of this case study are no exceptions.

The Project of Quality Assessment of Undergraduate Education is implemented by the HEEC. The evaluators are scholars of various disciplines with a high academic reputation or management experience. They are recommended by universities according to a quota decided and ultimately appointed by the Ministry of Education. The HEEC trains the evaluators and organizes expert teams for each assessment programme (MoE, 2002).

The evaluation procedures are standardized and include self-assessments, site visits and follow-up reforms. First, each participating institution is required to prepare a self-assessment report, using a fixed format provided by the HEEC, before the site visit of external evaluators. Self-assessment reports of the evaluated institutions are collected by the visiting committee, which is composed of seven to thirteen experts. On the basis of an institution's self-assessment report, the expert committee formulates specific evaluation schedules for its visit, which lasts approximately one week. Their evaluation methods include a tour of the campus, in-class inspection and interviews; and their evaluation criteria are set out by the MoE containing eight major indicators and 19 sub-indicators. The content of the self-assessment report, together with the information gathered during the on-site visit, allows the expert panel to produce a review report. This report usually consists of recommendations for the evaluated institution and a judgement on its overall teaching quality, based on a grade scale: excellent, good, qualified or unqualified. After the site visit and the production of the review report, the panel reports its assessment results to the MoE. Higher education institutions must implement reforms in the light of the external examiners' recommendations (MoE, 2002).

Between 2003 and 2006, 304 HEIs were evaluated in this way. The number of excellent, good, qualified and unqualified institutions was respectively 193, 90, 21, and 0 (HEEC, 2008). The three universities in our case study were all judged as 'excellent' HEIs. It is recognized that the evaluations results not only affect

universities' public funds, but also have implications for universities' quotas for student recruitment and for the authorization of master and doctoral programmes, which is quite significant for institutions' reputation and development (Zhou, 2004).

According to the survey data of two studies on the policy impacts of quality assessment of undergraduate education (Li, 2006; Zhang and Zhu, 2007), the quality assessment policy has focused attention on teaching, and it is beneficial in improving teaching methods and in reforming teaching management. Members of staff all agreed that the policy has significantly improved teaching management and university development planning. But as far as teaching outcomes such as student learning are concerned, they have hardly been improved by the new policy.

The policy has also brought some unintended consequences, one of which results from the direct connection between evaluation results and funding allocation. As the information affects the resources available from the government, it is a rational choice for HEIs to report their strengths rather than their weaknesses, their successes rather than their failures – and even to hide their weaknesses and shortcomings, which in the end will hamper HEIs' improvement (Dao, 2009). What is worse, in order to cater for the criteria of quality assessment, the falsification of materials (such as student examination papers, graduate theses and teaching regulations) occurs in evaluated institutions. The 'creation' of false materials becomes a huge drain for staff (students have even been asked to help) (Zhu *et al.*, 2007). Falsification not only weakens the transparency and validity of the quality evaluation system but also violates professional and scholarly norms and ethics, which may further erode society's trust in HE (Du and Zhou, 2006). In such circumstances, how could universities fulfil the task of lifelong learning?

Access to adult higher education

Because of the strong demand for HE in China, access to courses leading to an academic qualification is also competitive. Admission requires applicants to reach the minimum score in the National Adult Higher Education Entrance Examination (NAHEEE) (*chengren gaokao*). In 1986, the State Education Commission (SEC) and the Ministry of Finance issued a joint declaration for the nationwide unified enrolment of adult students – not the regular senior secondary school graduates, but the members of the work force who qualified for admission by taking a test. The State Education Commission established unified questions and evaluation criteria for the test and authorized provinces, autonomous regions and special municipalities to administer the test, grade the papers in a uniform manner, and determine the minimum points required for the admission. Higher education institutions (HEIs) and adult HEIs are to enrol the students according to the results.

Higher education instititutions (HEIs) and adult HEIs provide AHE non-academic qualification programmes as well. These include on-the-job training, education for single-discipline qualification certificates, education for vocational certificates and postgraduate continuing education. There are no entry requirements for non-academic qualification study.

Conclusion

The concept of lifelong learning has acquired more significance nationally and internationally during the last decade. The Chinese government attaches great importance to the development of adult HE and has developed a series of policies to promote lifelong learning. Lifelong learning puts emphasis on learners' initiative, activity and creativity, and it requires learners to be trained as lifelong learners (Xu, 2001). However, the current structure of university adult HE in China, in respect of both teaching and learning, does not fit in very well with this concept of lifelong learning. Teaching needs to accommodate the demands of the increasingly diverse student populations, purposes and patterns of study, as participation has widened and been assumed to extend over careers and lifetimes. Courses should be designed with two principles in mind: changes in knowledge and the needs of the labour market. Course material should be 'new' so as to keep abreast with changes in a given field. Through the courses, students should be able to acquire competences that will help them find solutions to problems they encounter in their professional or working life. The AHE curriculum should have its own characteristics.

The sharp rise of student enrolments in universities has brought about sudden constraints in resources which, in fact, are necessary preconditions for the healthy development of AHE. However, the contingent measures taken are to broaden the class size by multiples, to increase workloads for teachers, to employ retired teachers and temporary teachers, even to lower the qualifications when recruiting. Moreover, physical facilities fall far short of those needed for the expansion, for example, the deficiency of laboratories and classrooms, and the scarcity of library resources. Practices in such situations have negatively affected the quality of adult HE provision.

In the process of teaching quality assessment in China, other stakeholders have no voice at all. Thus, the assessment process risks becoming a game played between government and HEIs. As the opinions of students, employers and other stakeholders on the assessment and improvement of teaching quality are not taken into account, the policy efficiency in improving quality is lessened (Liu and Rosa, 2008). At the same time, accountability towards these stakeholders is also weakened.

In the process of constructing a learning society in China, universities will certainly emerge as institutions of lifelong learning. However, the current situation of university adult HE is not satisfactory, and it will certainly not help to develop a lifelong-learning-based society and promote citizens' all-round development. Universities should be clearly aware of the fact that students on AHE programmes are placing great demands on them both intellectually and structurally. The quality of university AHE must be improved; and such improvement will be crucial to its sustainability and development in the future.

References

Arnstein, C. (1982), 'Credentialism: why we have diploma mills', *Phi Della Kappan*, 68: 550–552.

Cohen, L. Manion, L. and Morrison, K. (2000), *Research Methods in Education*, London: RoutledgeFalmer.

Dao, J. (2009), 'Analysis of game theory of assessment contradiction in China's higher education', *Theory and Practice of Education*, No. 3: 12–14.

Dave, R. (1976), *Foundations of Lifelong Education* (ed.), Hamburg: UNESCO Institute for Education, and Oxford: Pergamon Press.

De Vaus, D. (2002), *Surveys in Social Research*, 5th edition. London: Routledge.

Deng, X. (1977), *Speech at a forum on work in science and education*. Online at http://english.peopledaily.com.cn/dengxp/vol2/text/b1130.html (accessed on 25 June 2009) (in Chinese).

Deng, X. (1978), *Speech at the National Conference on Education*. Online at http://english.peopledaily.com.cn/dengxp/vol2/text/b1190.html (accessed 25 June 2009) (in Chinese).

Dewey, J. (1916), *Democracy and Education*, New York: Free Press.

Du, R. and Zhou, T. (2006), 'The pluralism of higher education quality and the reform of the assessment system: review of the annual conference of the association of higher education evaluation in 2006.' *China's Higher Education Evaluation*, 4: 23–27 (in Chinese).

Goodman, D. (2002), 'Structuring local identity: nation, province and county in Shanxi during the 1990s', *China Quarterly*, 172: 837–862.

HEEC (Higher Education Evaluation Centre) (2008), online at http://www.pgzx.edu.cn/index.jsp (accessed in July 2009) (in Chinese).

Jarvis, P. (1999), 'Global trends in lifelong learning and the response of the universities', *Comparative Education*, 35: 249–257.

Jiang, Z. (1999), 'Improving the quality of the general public should be the ultimate purpose of education', speech presented at the Third National Working Conference on Education in Beijing, China, 26 May (in Chinese).

Jiang, Z. (2001), '*Advancing human capacity building and promoting the common prosperity in Asia-Pacific Regions with a joint effort*, speech presented at the APEC Human Resource Development Forum in Beijing, China, 15 May (in Chinese).

Levin, H. and Xu, Z. (2005), 'Issues in the expansion of higher education in the People's Republic of China', *China Review*, 5: 33–59.

Li, B. (2006), 'The review of investigation in 177 higher education institutions evaluated from 2003 to 2005'. Online at www.pgzx.edu.cn/upload/files/yuanxiaopinggu/LiYB1.pdf (accessed on 26 July 2009) (in Chinese).

Lincoln, Y. and Guba, E. G. (1985), *Naturalistic Inquiry*, Newbury Park, CA: Sage.

Liu, S. and Rosa, M. (2008), 'Quality assessment of undergraduate education in China: a policy analysis', *Higher Education Management and Policy*, 20: 1–18.

Maheu, R. (1973), 'An aid to reflection for necessary renovations', *Prospects*: III.

Medel-Añonuevo, C., Ohsako, T. and Mauch, W. (2001), *Revisiting Lifelong Learning for the 21st Century*, Hamburg: UNESCO Institute for Education.

Min, W. (2001), 'Current trends in higher education development in China', *International Higher Education*, 22. Online at http://bc.edu/bc_org/avp/soe/cihe/newsletter/News22/text014.htm.

MoE (Ministry of Education) (2002), *Project of Quality Assessment of Undergraduate Education*, Beijing: MoE (in Chinese).

OECD (Organization for Economic Co-operation and Development) (1973), *Recurrent Education: A strategy for lifelong learning*, Paris: OECD Centre for Educational Research and Innovation.

Rogers, A. (2006), 'Escaping the slums or changing the slums? Lifelong learning and social transformation', *International Journal of Lifelong Education*, 25:125–137.

Schuetze, H. G. (2007), 'Individual learning accounts and other models of financing lifelong learning', *International Journal of Lifelong Education*, 26: 5–23.

Sun, Q. (2004), 'To be *Ren* and *Jun Zi*: a Confucian perspective on the practice of contemporary education', *Journal of Thought*, 39: 77–91.

Sun, Q. (2008), 'Confucian educational philosophy and its implication for lifelong learning and lifelong education', *International Journal of Lifelong Education*, 27: 559–578.

Titmus, C. (1989), *Lifelong Education for Adults: An International Handbook*, Oxford: Pergamon.

Tuijnman, A. C. and Boström, A-K. (2002), 'Changing notions of lifelong education and lifelong learning', *International Review of Education*, 48: 93–110.

UNESCO (United Nations Educational, Scientific and Cultural Organization) (1972), *The Faure Report: Learning to Be*, Paris; UNESCO.

Wang, N. and Morgan, W. J. (2009), 'Student motivations, quality and status in adult higher education in China', *International Journal of Lifelong Education*, 28: 473–491.

Xu, X. (2001), 'The role of the university in lifelong learning: perspectives from the People's Republic of China.' *Higher Education Policy*, 14: 313–324.

Yeaxlee, B. (1929), *Lifelong Education*, London; Cassell.

Zhang, J. and Zhu, S. (2007), 'Investigation on higher education quality assessment in China', *Science Time*, 2 January (in Chinese).

Zhou, J. (2004), 'Promoting quality assessment and improving teaching quality in Chinese higher education institutions', an address to the foundation of the Higher Education Evaluation Centre, Beijing (in Chinese).

Zhou, Y. (2002), 'Enhancement of education quality should be considered to the strategic level', *China Education Daily*, 26 March (in Chinese).

Zhu, Y., Miao, X., Chen, L. and Yan, Y (2007), *Falsification in quality assessment of undergraduate education in China*. Online at http://www.cew.org.cn/ (accessed 26 July 2009) (in Chinese).

3 The role of distance education in higher education in contemporary China

Bernadette Robinson, Shuoqin Yan and Shukun Mo

Introduction

Unusually among developing countries China has focused on higher education rather than on basic education as a key part of its development strategy and a rapid expansion has taken place since 1999. Government spending has increased resources input to the higher education sector, especially to 'élite' universities. Some institutions have amalgamated in order to consolidate universities and new organizational forms have emerged. The expansion of student numbers has been huge. China's gross enrolment rate (GER) in higher education increased nearly fivefold between 1990 and 2006 and by 2007 there were 27 million students in tertiary education (MoE, 2008). The GER before 1996 was generally lower than 7 per cent per year, but by 2006 it reached 22 per cent, suggesting that higher education in China in the process of transition from an élitist to a mass system.[1]

Despite the massive expansion and increased funding for higher education in China, there remains a gap between the supply and demand for student places and an unequal distribution of access and resources. Within the expanded student numbers, four times as many urban students enrolled as rural, reflecting the increased economic and social inequality between rural and urban, and western and eastern/coastal populations. Resource distribution in higher education has been biased towards large cities and prosperous provinces:

> Since all the top universities are centrally financed and supported by the Ministry of Education, uneven access to these universities implies unfair distribution of central resources at the expense of students from the rest of the country, particularly from the West where the number of national key universities is relatively small.
>
> Yao *et al.*, 2008: 15

One option for widening access to higher education at affordable cost to governments and learners is through distance education, a strategy used worldwide and especially in Asian countries in recent years. In China, distance education in one form or another has played a significant role in the expansion of higher education provision over the last three decades with beneficial results:

> Distance higher education has widened opportunities for access to higher education, especially for employed adults, school leavers and some disadvantaged groups. It has also improved the geographical distribution of higher education across China by creating and developing educational provision for advanced study in remote, mountainous, rural and minority nationality areas where the economy, science and technology, education and culture are underdeveloped … providing programs, curricula and courses in urgent demand from national and local labor markets and various groups. Furthermore, it has achieved economies of scale and a cost effectiveness that has been recognized by governments and the general public.
>
> Ding, 2001: 28–29

Distance education continues to play a significant role in China's higher education provision for political, social, economic and technological reasons. In this chapter we review its current role. We begin by giving a brief overview of distance higher education before focusing on the two main forms of provision, the Open University of China (OUC)[2] and the Modern Distance Education Project (MDEP). In the final section we examine key issues and challenges in the use of distance education for higher education in China.

Distance higher education in China

Distance education has been a part of higher education provision in China since the 1980s as one of its 'non-conventional' forms (*qita xingshi juban de gaodeng jiaoyu*, 'higher education set up in other forms'). These included the China Central Radio and Television University (CCRTVU), correspondence colleges, evening universities, factory-run staff and workers' universities, county-run peasant universities, management cadre universities and teacher in-service colleges. Between 1982 and 1987 greater expansion in higher education enrolment took place through these non-conventional forms (a massive 350 per cent increase) than through traditional universities (53 per cent increase). From its establishment in 1979, the main provider of distance education has been CCRTVU, for example, in 1982 it enrolled 58 per cent of non-conventional students, equivalent to a third of the students in the traditional universities (McCormick, 1986). In the following decades CCRTVU continued to maintain a steady presence in higher education, usually around 10 per cent of all higher education students.

Distance education in China takes four main forms: correspondence courses provided by departments of continuing education at traditional universities; distance education courses provided nationally by the Open University of China (formerly the China Central Radio and Television University, CCRTVU), online courses provided by selected government-approved universities (the Modern Distance Education project) and self-study without course provision and in preparation for the college-equivalent State Examination for Self-Study. China's distance education has generally followed the path of other countries in moving through overlapping and sometimes parallel phases of changing technologies: the

text and correspondence programmes of the 1950s and 1960s; the combined media (radio, television, audio- and video-cassettes and print) of the 1970s and 1980s; the variety of new technologies of the 1990s (such as CD-Rom, video and audio conferencing, and computers); and more recently the knowledge media (the convergence of computing, telecommunications and cognitive science). In contemporary China, the term for 'distance education' has come to be synonymous with information and communication technologies (ICT) and online education though more 'traditional' distance education forms, using older but appropriate technologies, still play an important role in less developed and rural regions.

Since 1999, distance higher education in China has gained increased attention from government and a new impetus as several developments have converged. These include a new policy emphasis on lifelong learning, a shortfall in the supply of places at traditional universities, the rapid and widespread establishment of infrastructure for ICT and the influence of world-wide growth in e-learning as a means of building a knowledge economy. Strong political support for distance education, with a heavy emphasis on the use of ICT, has come from government. In 1999, the Central Committee of the Communist Party of China (CCCPC, 1999) emphasized the importance of educational technology in providing lifelong learning opportunities for the whole of society and for rural areas in particular. Lifelong learning was defined as an activity whereby individuals are able to engage in learning at any time, in any place and with any curriculum for their career and personal needs. In implementing this vision of lifelong learning, ICT-based distance education is deemed to have an essential role, as indicated in policies, research papers and reports (Yang, 2008). In 2002, the Sixteenth National Congress of the Chinese Communist Party emphasized the strategy of using technology to leverage education at all levels.

As part of its Action Plan for Invigorating Education for the Twenty-First Century (MoE, 1999), the Ministry of Education proposed the construction of an open education network as the basis of a lifelong learning system (to be integrated into the national education system) and also the implementation of the Modern Distance Education project as one of six new higher education initiatives. In its work-plan for 2003 the Ministry of Education identified the use of technology for education as a major activity, stating its intention to pilot network technologies, conduct research on multi-media and net-work-based courseware, develop a web-based public service system in education, and create and share quality educational resources. The government has invested substantial financial resources in building the ICT infrastructure for education, resulting in the China Education Research Network, satellite TV education transmission networks, a national e-resource library and educational software development. Further investment was made in the Modern Distance Education project. In 1998–2002, Ministry of Education invested 460 million *Renminbi* Yuan in it; in 2001–2003, the Ministry of Technology invested 44 million *Renminbi* in the application of key technologies for Modern Distance Education; in 2000–2002, the government's National Development and Reform Committee invested 35 million *Renminbi* in the Modern Distance Education support platform.

As a result of these policy decisions and investment in infrastructure, the distance education landscape in China is changing. Correspondence courses are dwindling or migrating to new forms as newer technologies take hold. Multimedia distance education, as provided by the Open University of China, has continued to use a combination of media accessible to many while improving the quality of materials design and learner support and adding online learning. Internet-based distance education is growing rapidly and has brought in traditional universities as new providers of 'modern' distance education. The State Examination for Self-Study continues to attract huge numbers of hopeful examinees seeking a qualification in a highly competitive graduate labour market. The two main forms of distance higher education in China are the Open University of China and the Internet Institutes at traditional universities (the Modern Distance Education project). In the next sections we focus on these and their roles in contemporary Chinese higher education.

The Open University of China (OUC)

Through its nation-wide system the Open University of China (formerly CCTRVU) has played an important role in widening access to learning opportunities and building social capital for China's development. Since 1982 it has produced over 7 million graduates at diploma and degree level as well providing non-degree education and short-term training to about 40 million people. Like other distance teaching universities around the world, the Open University of China is a university of the second or only chance for many adult learners. It offers relatively open access for a mass adult student population. In contrast to university entrance determined by the fiercely competitive, high stakes *gaokao* (the national higher education entrance examination taken at the end of senior secondary school), the Open University of China has no entrance examination. Entry is gained to diploma courses through possession of a senior secondary school certificate or 'adult *gaokao*' certificate (a less difficult version of the secondary school *gaokao*) and to bachelor degree courses though possession of a diploma-level qualification. The Open University of China is able to make awards at diploma (*zhuanke*) level but does not have the right to award its own bachelors' degrees (*benke*). In 2002 the Ministry of Education granted it permission to award bachelors' degrees in partnership with other traditional universities who have oversight of the degree standards.

Origin and organization

The Open University of China (as CCRTVU) has been an established part of higher education provision since its opening in February 1979, after the proposal and planning for it was initiated by Deng Xiaoping a year earlier, prompted by the success of the UK Open University and earlier experience of educational television in China. The Open University of China comes under the direct administration of the Ministry of Education, which provides a block grant to add to its

income from student fees. The university's system consists of a headquarters in Beijing, the topmost of four administrative levels integrated by a policy of 'five unities': unified curricula, syllabi, textbooks, examinations and assessment. At the second level, there are 44 provincial or metropolitan universities (Provincial Radio and Television Universities), the responsibility of provincial and metropolitan governments who contribute to their funding. The provincial level universities between them manage a total of 1,000 branch schools at prefecture and city (third) level, 2,000 county level centers (fourth level of administration) and 60,000 local tutorial centers. Through this structure the Open University of China is able to reach learners in urban and rural areas as well as regions inhabited by ethnic minorities.

The Open University of China has six academic faculties (arts and law, economics and management, engineering, teacher education, foreign languages, and agro-forestry and medicine) providing 75 major programmes of study. The university also has several schools or divisions for specific groups of learners, for example, for the army and air force and the disabled. It also has a School of Continuing Education for non-degree and vocational education and training, a TV College of Teacher Education, the China Liaoyuan Radio and TV School for rural development (for example, in agriculture) and a secondary-level technical school. The mission is a broad one: to provide opportunities for higher education (diplomas and degrees) for professionals in various industries and enterprises, to conduct non-degree education through on-the-job training, to provide educational services for people from all walks of life and to manage the use of educational resources from its constituent provincial universities. It has also been assigned by the Ministry of Education to provide a public student support service in collaboration with universities involved in the Modern Distance Education project (described later in this chapter). In 2009, the Ministry of Education approved the Open University of China's Eleventh Five-Year plan, emphasizing its role in reaching rural and western areas of China, and setting it the goals of becoming a world-class open university and a national centre for distance education (a resource for other universities and colleges).

The OUC's roles in the system of higher education

While most other 'non-conventional' forms of higher education have diminished, the Open University of China has continued to play a significant role in higher education provision. Between 2001 and 2005 it produced 1.07 million graduates at college diploma *(zhuanke)* and degree *(benke)* levels, 9.1 per cent of all equivalent graduates in China. By September 2008, there were 3.09 million enrolled students, of whom 2.95 million were taking college level *(zhuanke)* and undergraduate level *(benke)* courses (CCRTVU, 2008). These constituted about 10 per cent of the country's total enrolment in higher education. From 1990 to 2008, about 20.82 million students successfully completed CCRTVU courses of various kinds in all parts of China. In poorer provinces, where few alternatives exist, the university's presence has greatly increased access to higher education and helped build

local social capital. For example, in Inner Mongolia, a large poor province with a harsh climate, a largely rural population and limited higher education provision, the provincial level Open University has established province-wide coverage, with 16 regional centres and 93 local learning centres. These serve a third of the province's adult higher education students (96.5 per cent of whom are working adults). In general, in rural areas and western provinces, the Open University of China is the mainstay of local higher education provision, promoting equity in access to higher education and helping to redress imbalances in participation rates.

With a teaching system using television, CD-Rom, print, face-to-face meetings and tutor support, the Open University of China has proved a less costly alternative to campus-based courses. The average annual cost of producing an Open University of China graduate on 'traditional' distance education programmes (not including online courses) was reported as one-third to two-fifths that of a conventional university (Ding, 2001). The Open University of China has been able to achieve economies of scale because of the large number of students per course, choice of media and limited interactivity with tutors. However, the scale of the operation also generates predictable problems for a very large distance teaching university: the management of quality in a huge distributed organization; the tension between the consistency that the 'five unities' enable and the restrictions they place on their provincial-level universities' scope for locally appropriate innovation; effective coordination between the four administrative levels; variation in standards and conditions among the constituent provincial universities; the status of the Open University of China in the public eye and in terms of the equivalence of its qualifications to those of other universities; and the pace at which such a large organization can respond to a changing environment.

The Open University of China has adapted and evolved in response to changing conditions and higher education needs in China and to international trends in distance education. From being a one-way delivery system, using print, radio or TV and class teaching, the university has adopted the use of more interactive technologies and strengthened its learner support. It has placed increasing emphasis on quality standards and quality assurance within its organization, undertaking internal and external reviews. It has refocused its original mission, which was largely directed at improving human resources to meet national development goals, to one that pays more attention to students' personal fulfilment and professional aspirations. It has aimed to increase equity in access and quality, strengthening its services to poorer western provinces through the special allocation of resources. From a focus on mainly providing qualifications it has moved to a broader vision, which gives more emphasis to lifelong learning and the Ministry of Education sees the Open University of China as an important resource for developing a national lifelong learning system. The university has also undertaken new initiatives, for example, managing the *Aopeng* student support service in collaboration with other universities for Modern Distance Education courses.

The Open University of China continues to be an important vehicle for the mass provision of higher education. Although it cannot compete with the most prestigious universities in terms of status, post-graduate training, research and entry

qualifications of students, it has a national infrastructure that has enabled it to reach learners that traditional universities cannot. It has produced good quality learning resources and has long experience in managing distance education. However, its position as the country's major provider of distance education is challenged in some ways by the Modern Distance Education Project, which has enabled traditional and more prestigious universities to offer online distance education programs, thus giving learners more choice of provider and course. We describe this initiative in the next section.

The Modern Distance Education Project

'Modern Distance Education' (*dang-dai yuancheng jiaoyu*) was set up as a pilot project by the Chinese government in 1999 and refers to ICT-based distance education, using multi-media computer facilities and the Internet for off-campus learners. This initiative was the outcome of several key policies emphasizing the use of 'informatization',[3] especially as an essential element in the modernization of education (Huang *et al.*, 2007). The project had two goals: to widen access to higher education and to improve its quality through the use of advanced technologies.

The Chinese government has been a driving force in developing the use of ICT in higher education, providing the infrastructure, injecting large funds, developing technical standards and regulating provision. It has encouraged universities to collaborate and share expertise and materials for e-learning and the private sector to invest in it. E-learning in Chinese education has become big business, primarily driven by the higher education sector. One report puts it at 35.2 billion RMB in 2008 and predicts a further increase to 723 billion RMB by 2012, given current policy and proposals for the construction of a lifelong learning system (IResearch, 2008). This has given rise to a debate about the commercialization of higher education in China.

The ICT infrastructure

The Modern Distance Education initiative was made possible by the national development of infrastructure and strong policies. China's 2006–2020 National Development Strategy and the Eleventh Five-Year Plan emphasized the use of ICT, as have many other policy documents. National and local government, together with other agencies, invested large funds and human resources to build a network infrastructure and information services platform. Internet development has been rapid as can be seen by comparing the situation in 1997 with that in 2008–2009. The first statistical survey, carried out by the China Internet Network Information Centre (CINIC) in October 1997, showed that China had 620,000 Internet users with the majority of users on dial-up access. Internet penetration was low, less than 1.0 per cent in some of the poorer provinces such as Ningxia, Gansu, Yunnan, Guizhou and Inner Mongolia (compared to 36 per cent in Beijing). Most users (46.7 per cent) accessed Internet in their offices and 25.3 per cent had Internet access at home. Students constituted 13.6 per cent of users,

second only to computer professionals (15.0 per cent). Cost and connectivity speed were identified as the two main obstacles to the development of Internet in China.

By June 2008, China had become the country with the largest number of Internet users in the world, overtaking the United States. In June 2009, there were 338 million Internet users, of whom 320 million used broadband connections (94.3 per cent of all Internet users). Mobile Internet users reached 155 million, with increasing use in rural areas. The largest Internet user group was students (31.7 per cent). Most users (80.2 per cent) accessed Internet from home or from Internet cafes (35.5 per cent), and 25.7 per cent used access in the office or in school (18.8 per cent). Internet has become a necessary tool for many: 77.5 per cent of those surveyed said that they could not work or study without it. The overall Internet penetration rate reached 25.0 per cent, higher than the world average (CINIC, July 2009). Despite this, Internet penetration rates vary widely between areas, for example, from 11.5 per cent in the poor Western province of Guizhou to 60 per cent in Beijing (CINIC, January 2009). Also, although broadband coverage is wide, broadband and download speeds are slow (thus limiting access to multi-media learning resources). Costs of use in relation to income have reduced since the first CINIC survey in 1997, but problems of speed continued to be identified in the survey of July 2009. This is likely to be a key target for future improvement given the growing public awareness of ICT and its advantages (CINIC, July 2009).

The infrastructure for educational use combines sky-net (CEBSAT, China Education Network Satellite) and ground-net systems. Through CERNET (China Education and Research Network), initiated in 1994, a three-level infrastructure is provided: a national backbone network, local area networks (LANS) and campus intranets. In 2004, CERNET 2 pilot was launched, connecting a large number of universities in major cities. Using IPv6 protocol, CERNET 2 provided a transmission speed 1,000 times faster than CERNET 1 as well as larger storage capacity, higher levels of security and improved quality in synchronous communication. The integration of CERNET and CEBSAT has encouraged a growth in the use of Internet for online programs (Wang and Crook, 2006). It provides educators with new options in designing and delivering distance education courses.

Implementation of the modern distance education project

In March 1999, the Ministry of Education approved the establishment of four Internet Institutes (*wangluo xueyuan*) to pilot online distance education (Modern Distance Education at Peking University, Tsinghua University, Beijing Telecommunications University (all three in Beijing) and Zhejiang University. In their first year, the four Internet Institutes enrolled 9,000 students. Huge rapid expansion in student numbers followed, as more universities, including the Open University of China, were licensed by the Ministry of Education to provide online courses. In deciding which universities or colleges should be granted a license to set up Internet institutes to provide Modern Distance Education programs, the Ministry of Education stated five

requirements. Any university wishing to be licensed for Modern Distance Education needed to be well established with a well-qualified teaching staff, operate a good campus networking infrastructure, have available online teaching resources of good quality, demonstrate prior experience in using ICT in education and provide a detailed plan for future implementation of Modern Distance Education courses (Ding *et al.*, 2005). Once granted a licence the universities had considerable autonomy in determining entrance requirements and enrolment numbers, selecting students, offering new subject specialties and issuing academic credentials recognized by the Ministry of Education. Programs were offered at three levels: undergraduate degree, postgraduate master's degree and vocational diplomas. The Internet Institutes are usually staffed by administrators and advisors, with academic staff from the parent university being called on to teach a course in addition to or as part of their on-campus work. Universities have been able to generate new revenue for their own use through the Modern Distance Education courses.

Enrolment in Modern Distance Education courses has grown rapidly, if unevenly (see Table 3.1). Though the average number of students per Internet Institute is 8,614, in fact there is wide variation between institutes. By the end of 2003, there were (cumulatively) 2.3 million enrolments in Modern Distance Education courses. About 90 per cent of students were working adults, taking courses in engineering, management, medicine, literature, sciences, agriculture, economics, pedagogy, law and philosophy (Zhang, 2004). By 2005 the total number of students who had enrolled in Modern Distance Education courses exceeded three million (Chen *et al.*, 2009).

The numbers of students enrolling in distance education are increasing for both the Internet Institutes and the Open University of China (see Figure 3.1). After an initial surge in numbers for both, growth in the numbers at Internet Institutes levelled out from 2002 to 2005, as problems emerged and regulations were introduced, while at the same time, Open University of China numbers continued to rise sharply. The number of students at Internet Institutes showed a rapid rise again in 2005–2008, at a slightly faster rate than at the Open University of China though the latter continues to be the largest provider of distance education, enrolling more students than all the Internet Institutes combined.

Clearly, distance education is meeting a social need but its rapid growth over a short time-span has raised widely-expressed concerns about its quality and credibility. The history of the Modern Distance Education Project repeats the experience of some other countries when establishing distance education:

> In some cases, the governance of open and distance education develops on a piecemeal basis and policy tries to catch up later, trying to reduce undesirable variation in quality and standards.
>
> Robinson, 2004: 200

This is evident in the Ministry of Education's efforts to regulate distance higher education provision and set quality standards. The challenges and issues involved are examined in the next section.

Table 3.1 Enrolment in Modern Distance Education courses in Internet Institutions and CCRTVU (1999–2008)

	1999	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*
Enrolment in campus-based universities' Internet Institutes	9,000	21,000	184,000	238,765	223,855	235,084	244,862	426,266	458,431	577,150
Yearly growth rate		12,000 (133.33%)	163,000 (776.19%)	54,765 (29.76%)	14,910 (6.24%)	11,229 (5.02%)	9,778 (4.16%)	181,404 (74.08%)	32,16 (7.55%)	118,719 (25.90%)
No. of Internet Institutes (not including CCTRVU	4	30	44	64	57	70	66	68	67	67
Average no. students per Internet Institute	2,250	700	4,181	3,730	3,927	3,358	3,710	6,268	6,842	8,614
Average no. students per Internet Institute	2,250	700	4,181	3,730	3,927	3,358	3,710	6,268	6,842	8,614
CCRTVU enrolment	30,597	166,307	279,014	388,237	552,792	604,241	605,465	706,250	742,095	861,236
CCRTVU yearly growth rate		135,710 (443.54%)	112,707 (67.78%)	112,273 (40.22%)	164,555 (42.39%)	51,449 (9.31%)	1,224 (0.20%)	100,785 (16.65%)	35,845 (5.08%)	119,141 (16.05%)
Total no. MDE enrolments	39,597	187,307	463,014	627,002	776,647	839,325	850,327	1,132,516	1,200,526	1,438,386

Sources: CCRTVU Education Statistics Yearbook 2008; Ding *et al.*, 2005, p. 66.

Note: different sources vary in the numbers given for the years 1999–2002.

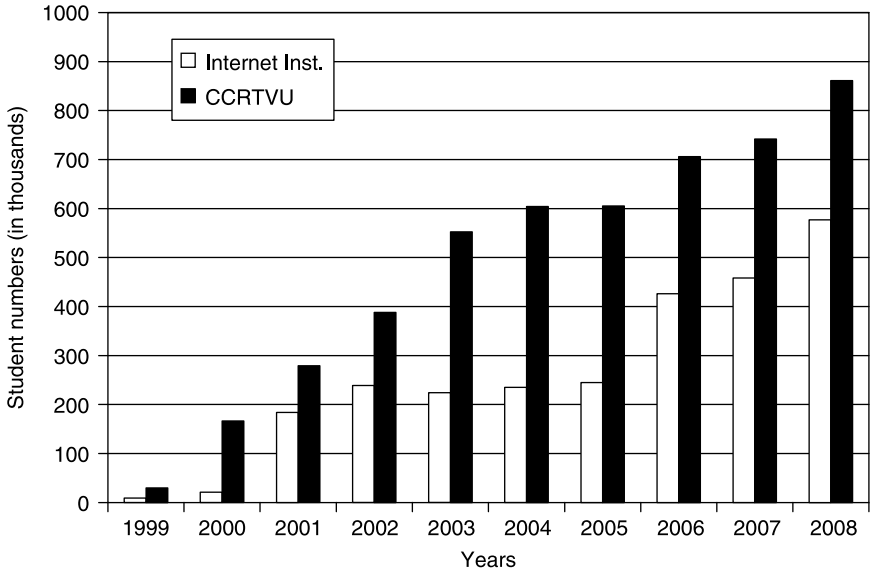

Figure 3.1 Modern Distance Education enrolment in Internet Institutions and CCRTVU, 1999–2008.

Challenges and issues

Some of the main challenges for the Modern Distance Education project have arisen from the speed and scale of implementation. The rush to embrace new technology ran well ahead of the planning and management of it, either by the Ministry of Education or the universities. The granting of licences for distance education to reputable universities unleashed huge demand for access to programs that were previously unavailable. Entrance requirements for online programs varied across institutions and were often lower than those for on-campus students, raising objections from full-time students who had competed for places through the *gaokao* examination. While the use of ICT brought a new glamour and aura of 'modernization' to distance education, some of its fundamental requirements in planning, management and student support were not well understood or implemented, nor was its potential for pedagogical change. Most importantly, many of the academic and other staff involved lacked sufficient training in the design, preparation, presentation and logistics of online courses. Despite this, the Modern Distance Education Project expanded in scale while still at an immature stage of development.

Three years into the Modern Distance Education Project, Ding (2002) identified ten challenges facing the Chinese government and universities: the need for a strategic national vision of e-learning, more effective government policies, the tension between short-term financial gains and long-term educational objectives, shortcomings in the administrative structure for managing distance

education, the relationship between cost and revenue, technology management, standards for the development and sharing of resources, use of interaction, quality and learner support. Efforts to meet these challenges continue at present. After the initial few years of surging enrolment and widely-varying quality and conditions, the Ministry of Education stepped in to deal with what Ding (2005) has referred to as the 'management of confusion', issuing a number of regulations and guidelines to exert some control over the situation. These measures included regulations on admissions (MoE, 2001, MoE, 2004a; MoE, 2006), the management of distance learning organizations and quality control (MoE, 2002), local study centers (MoE, 2003), establishment of the Board of National Examinations for the Modern Distance Education courses (MoE, 2004b), electronic registration (MoE, 2004c), student service provision with CCRTVU (MoE, 2005a), penalties for malpractice by Internet Institutes (MoE, 2005b), and guidelines for organizing examinations (MoE, 2005c). Standardized computer-based national examinations of college-level English, Chinese and advanced mathematics were introduced for students enrolled from 2005 onwards. As Zhao *et al.* (2006: 48) observe:

> These changes and modifications partly reflect the government's struggle to strike a balance between tight regulation and flexibility, between tradition and innovation, and partly reveal the current social, political, economical, and educational realities in China with regard to online education.
>
> Zhao *et al.*, 2006: 48

A key aim in these efforts is to ensure quality in distance education.

Quality and credibility

Since its inception, distance education worldwide has struggled to prove that second-chance education through distance learning need not necessarily be second-rate:

> Open and distance education has faced an ongoing struggle to establish its credibility and legitimacy, even when its quality is good. Its success in achieving this has varied among countries and institutions. Much doubt has been cast on the quality of open and distance education, especially in contexts where it is new or where it faces a history of poor quality provision. For these reasons, attention to its governance, accreditation and quality assurance is essential in establishing good practice, standards and reputation, especially in the present climate of expansion and electronic delivery.
>
> Robinson, 2004: 181

In the case of China, the way in which the Modern Distance Education Project was implemented, especially in its first few years (up to 2004), created problems of image and experience that will take time and effort to solve and perhaps detract from its substantial achievements. One recent market survey concluded:

> Online HE expands fast, yet old problems still plague the industry, but although service quality has been improved, old problems still exist and continue to cause major problems. Our research data at the end of 2007 showed that the biggest problem responsible for public doubt on online HE is the acceptability of the online school diplomas among the society. The doubt was shared by 68.7 per cent of the responders to the survey.
>
> Market Avenue, 2008: 1–2

The acceptability of distance education qualifications varies among employers in what is a highly competitive graduate market. This is less of a problem for working adults gaining further (second) qualifications through distance education than for those gaining their first qualification (diploma or degree) through distance education, whether via the Internet Institutes at traditional universities or Open University of China. Though official policy is that online degrees are equivalent to on-campus degrees, not all agree:

> those who obtain their degrees via distance education have proved to have had a hard time, finding employment in a country where ascribed status is still highly valued.
>
> Wang, 2008: 73

The decision of the Ministry of Education to require award certificates to state whether the qualification was gained through distance education has reinforced a distinction between traditional and distance education that some may see as unhelpful. At the same time, measures to ensure the quality of distance education in China have been taken by the Ministry of Education (regulations, guidelines and inspection) and the universities themselves. Some universities, such as Beijing Jiaotong University, have adopted ISO 9000 quality standards and others have introduced their own approaches for managing quality (Hou, 2008). The Ministry of Education's licensing of universities to provide online programs is seen as an important mechanism for establishing credibility. The consequence of not having this licence is illustrated by the case of 12,000 primary and middle school teachers whose online diplomas from the unlicensed Hubei Province Education College in 2002–2003 were subsequently declared invalid by the Ministry of Education's Information Consultation and Employment Guidance Centre (*China Daily*, 20 November 2009). In 2004, five Internet Institutes lost their licences because of poor quality and failure to comply with Ministry of Education regulations and they had to terminate their online courses (Zhang, 2004). Improving quality in distance higher education will require a combination of internal and external measures for Modern Distance Education providers, since some problems can be solved by the institution itself but others require action at the system or macro level. The quality issue also needs more research on it, as Yang suggests:

> Although great effort has been made by the Ministry of Education to tackle quality-related problems in Chinese online distance learning, more in-depth

> theoretical and practical exploration is badly needed in the search and implementation of appropriate solutions to quality assurance.
>
> Yang, 2008: 592

Collaboration and competition

The policy of letting 68 Modern Distance Education flowers bloom soon highlighted the need for Internet Institutes to cooperate rather than compete in order to avoid duplication and waste of resources. The provision of online programmes has generated both collaboration and competition between universities. Some inter-university collaboration has emerged, encouraged by Ministry of Education. For example, six institutes from the Shanghai region have formed a group to carry out joint admission procedures. In 2007 the National Distance Education Collaboration Group of Chinese Higher Education Institutes was formed and staff from 31 Internet Institutes met to discuss issues on the management and teaching of online programs, resource sharing, examinations, and online platform development. Another collaborative initiative was set up by the Ministry of Education to deal with the problem of widely varying quality or mismanagement of local learner support centres provided by the Internet Institutes. It introduced a public student support service (*Aopeng*) with around 800 local learning centres under the aegis of the Open University of China and in partnership with 30 Internet Institutes. Its role is to organize student recruitment, supervise tutors and students, administer tests and manage external public relations. *Aopeng* functions as a for-profit entity operated by a subsidiary company of the Open University of China. Not all universities providing Modern Distance Education programmes have joined in, some preferring to have their own local centres. While the demand for distance education continues to grow, the issue of competition is not yet a major issue, except perhaps for the Open University of China in relation to the Internet Institutes. However, differentiation of the roles, target groups and offerings of these two types of providers, together with the large pool of potential students, avoids some of the competition for the present.

Collaboration with private companies has grown quickly, with more than half of the Internet Institutes forming such partnerships. In this arrangement the Internet Institutes usually take responsibility for instructional design, resource development and teacher training and the private company for online platform development, student enrolment, and student support (Chen *et al.*, 2009). The role of government (the Ministry of Education) in this is, as for inter-university collaborations, to make policy, regulate and evaluate the provision. While this kind of collaboration brings benefits, it has also led to the criticism that it leads to the 'corporatization' of distance higher education

Pedagogical challenges

One expectation of the use of technology in higher education was that it would improve the quality of teaching and learning both on campus and in distance education. This expectation is being met only slowly and unevenly, though there

are examples of innovation too. In general, teaching approaches remain heavily reliant on delivery and dissemination rather than on interaction and knowledge construction. Online courses most often consist of video lectures, power-point presentations and text-based resources (though of course some universities are experimenting with a wider range of methods) and the interactivity that online learning affords is not yet strongly established. A study by Zhao *et al.* (2009: 95) observes that e-learning in China often equates with the delivery of packaged learning materials to large numbers of off-campus students:

> In China, network learning refers to a largely resource-based form of online learning and the learning material is "broadcast" to the masses with little student-to-student communication, and even less student-to-teacher communication. It is just a delivery system through which the individual student can receive the course material, which they are then expected to learn on their own.
>
> Zhao *et al.*, 2009: 95

Face-to-face teaching is seen by students and academics as an important part of an online course and students value it highly. In terms of the approach that face-to-face teaching takes, Zhao *et al.* (2009: 93) conclude from their study that lecturing continues to be the central method of teaching in Chinese higher education:

> We cannot over-emphasize the importance attributed by these teachers to the lecture method in the Chinese HE system. Despite the interest shown by all those interviewed, their personal eagerness to adapt e-learning strategies into their practice and the value they placed on e-learning, no one identified e-learning as a central teaching and learning method, or mentioned the possibility of running courses in conventional universities completely via e-learning in China. The lecture, delivered by an authority figure, is the central vehicle for transmitting knowledge.
>
> Zhao *et al.*, 2009: 93

As experience elsewhere has shown, when institutions begin to provide online courses, they tend to apply the technology to the pedagogical model they are accustomed to using, so major shifts in pedagogy do not automatically follow as a consequence of using the technology. In many Modern Distance Education programs there is a low level of interaction and sometimes none with course teachers. The extent and quality of interaction is also affected by the tutor–student ratio, which can vary greatly, from 1:30 to 1:600 (Chen and Wang, 2009). This is a program design issue as well as an economic one, but it also relates to the lack of skills that many academics have in online teaching and tutoring. Much more training is needed for them. This is one reason that the capabilities of the technology are not yet being fully exploited. However, making use of these will involve major pedagogical shifts in thinking and practice, not just skills in using technology.

Conclusion

The development of ICT infrastructure and policy emphasis on distance education in China has generated new interest, experiment and activity in distance higher education. Its potential benefits are recognized: its ability to reach learners in remote and rural areas, to widen access to higher education, to share high-quality learning resources, to provide courses that accommodate the needs of working adults, to support interaction between learners and teachers and to provide more cost-effective alternatives to face-to-face courses. China is well placed to make further use of distance higher education in the future. It has developed a widespread ICT infrastructure for distance education and universities are gaining more experience of it. Also, the Open University of China continues to provide a national system, with long-standing experience of a variety of technologies, knowledgeable personnel and the capacity to reach rural learners. It also provides a vehicle for further education and lifelong learning priorities in government policy.

The Modern Distance Education Project, called by Zhao *et al.* (2006) 'the grand experiment', is becoming more established in China, though not yet part of the mainstream in the parent universities. The Internet Institutes sometimes appear to be 'add-on' units rather integrated into the organization, mission and practice of the traditional universities to which they belong; degrees of integration vary. In his survey, Zhang (2004) acknowledged positive achievements in the use of modern technology for distance higher education and concluded that the foundations of the Modern Distance Education Project were laid though further work was needed to make it function well. There appear to be three main problems to solve: the quality of the programs and the learning experience, the credibility of the awards and the shifts in pedagogy needed to take full advantage of the technology. Some of the solutions lie within the hands of the Internet Institutes and the host universities; others lie at system level (for example, accreditation and quality assurance).

The demand for distance higher education in China is buoyant. Distance education is likely to continue to be an important means of providing continuing and professional education and to make higher education more accessible to a wider population. The challenges for providers and government is to ensure its quality and credibility and as a valuable mode of education and to clarify its role within the country's higher education.

Notes

1 According to Trow's definition (1972), a mass higher education system has between 15 per cent and 50 per cent of 18–22-year-olds in full-time higher education.
2 In 2009 China Central Radio and Television (CCRTVU, *guangbo dianshi diaxue*, or *dianda* for short) changed its name to the Open University of China. It is still known within China by its former name.
3 In China the term 'informatization' refers to the use of ICT for social development.

References

Chen, L. and Wang, N. (2009), 'Attitudes to distance education in China', in J. Baggaley and T. Belawati (ed.) *Distance Education Technology in Asia*, IRDC: Canada.

Chen, L., Chen, H. and Wang, N. (2009), 'Distance education in China: the current state of e-learning', *Campus-Wide Information Systems*, 26: 82–89.

China Central Radio and Television University (2008), *Education Statistics Yearbook*, Beijing: CCRTVU.

China Daily (2009), 'Thousands of teachers earn "fake" diplomas', *China Daily*, 20 November.

China Internet Network Information Centre (CINIC) (1997), *1st Statistical Report on Internet Development in China*, Beijing: CINIC, October.

China Internet Network Information Centre (CINIC) (2009), *23rd Statistical Survey Report on Internet Development in China*, Beijing: CINIC, January.

China Internet Network Information Centre (CINIC) (2009), *24th Statistical Survey Report on Internet Development in China*, Beijing: CINIC, July.

Central Committee of the Communist Party of China and the State Council (CCCPC) (1999), *Decisions on Furthering Educational Reform and Advancing Quality Education*. Beijing: CPC.

Ding, X. (2001), 'China', in Jegede and Shive (eds), *Open and Distance Education in the Asia Pacific Region*, Hong Kong: Open University of Hong Kong Press.

Ding, X. (2002), 'Distance education network colleges and universities face ten challenges', *Journal of Distance Education in China* (8) (in Chinese).

Ding, X. (2005) 'Debate on China's HEI network education performance and outcome of Comparative Study on Performance Guarantee, Evaluation and Certification of International Distance Education', *Distance Education in China* (in Chinese), 25: 19–24.

Ding, X., Gu, X. and Zhu, Z. (2005), 'The Chinese Approach', in C. McIntosh (ed.) *Lifelong Learning and Distance Education*, Paris and Vancouver: UNESCO and Commonwealth of Learning.

Hou, J. (2008), 'Distance Learning and Quality Assurance at Beijing University'. Online at http://www.cs.cityu.edu.hk/~ichl2008/local-proceedings/ICHL2008-PP098-107-10Pages.pdf (accessed 16 August 2009).

Huang, R., Jiang, X. and Zhang, H. (2007), 'The informatization of higher education in China: Present situation and challenges', in H. Spencer-Oatey (ed.) *e-Learning Initiatives in China: Pedagogy, Policy and Culture*, Hong Kong: Hong Kong University Press.

IResearch (2008), *Online Education Market Size 2008*. Online at http://www.iresearch.com.cn/Consulting/online_education (accessed 4 September 2009).

Market Avenue (2008), *Report on China's E-Learning Market*. Online at http://www.pr-inside.com/report-on-china-s-e-learning-market-r900369.htm (accessed 16 July 2009).

McCormick, R. (1986), 'The Radio and Television Universities and the Development of Higher Education in China', *China Quarterly*, 17: 72–94.

MoE (Ministry of Education, PRC) (1999), *Action plan for invigorating education towards the 21st century*. Online at http://www.moe.edu.n/edoas/website18/info3337.htm (accessed 4 June 2005).

MoE (Ministry of Education, PRC) (2001), *Tightening the Management of the Admission Work for the Modern Distance Education Pilot Program*. Online at http://www.moe.edu.cn/Webdoc/news/010824-02.htm (accessed 16th June 2004).

MoE (Ministry of Education, PRC) (2002), Regulation on tertiary distance learning organizations and enhancing quality control of online education.

MoE (Ministry of Education, PRC) (2003), Guidelines for regulating the administration of local study centers of modern distance education.

MoE (Ministry of Education, PRC) (2004a), Regulation on admissions of distance education students in 2004.

MoE (Ministry of Education, PRC) (2004b), Regulation on establishing the board of national examinations for modern distance education.

MoE (Ministry of Education, PRC) (2004c), Further regulation on electronic registration of distance education students.

MoE (Ministry of Education, PRC) (2005a), Guidelines on establishing the system for providing student services for modern distance education with CCRTVU.

MoE (Ministry of Education, PRC) (2005b), Penalties for some online institutes for their ill-practices.

MoE (Ministry of Education, PRC) (2005c), Guidelines on organizing national examinations for modern distance education.

MoE (Ministry of Education, PRC) (2006), Regulations on admission of distance education students in 2006.

MoE (Ministry of Education, PRC) (2008), *Education Statistics Yearbook 2008*. Beijing: China Statistics Publishing House.

MoE (Ministry of Education, PRC) (2009), *Education Statistics Yearbook 2008*, Beijing: China Statistics Publishing House.

Robinson, B. (2004), 'Governance, accreditation and quality assurance in open and distance learning', in Perraton and Lentell (eds), *Policy Issues in Open and Distance Learning*, London: Routledge.

Trow, M. (1972), 'The expansion and transformation of higher education', *International Review of Education*, 18: 6184.

Wang, T. and Crook, C. (2006), 'The experiment of tertiary online education in China: an overview', *International Journal of Instructional Technology and Distance Learning*, 3.

Wang, V. C. X. (2008), 'Enhancing the right to education through distance education in China', *Asian Journal of Open and Distance Education*, 6: 66–76.

Yang, M. (2008), 'Rethinking lifelong learning through online distance learning in Chinese educational policies, practices and research', *British Journal of Educational Technology*, 39: 583–597.

Yao, S., Wu, B., and Su, F. (2008), 'The impact of higher education expansion on social justice in China: A spatial and inter-temporal analysis', *China Policy Institute Discussion Paper* 34, Nottingham: University of Nottingham.

Zhang, Y. (2004), 'Survey of Modern Distance Education Universities and Reflections', *China Distance Education*, 30 September. Online at http://www.chinaonlineedu.com/info/news_special.asp?id=4932 (accessed 4 July 2009).

Zhao, J., McConnell, D. and Jiang, Y. (2009), 'Teachers' conceptions of e-learning in Chinese higher education: A phenomenographic analysis', *Campus-Wide Information Systems*, 26: 90–97.

Zhao, Y., Zhang, G., and Li, N. (2006), 'The Life of "Internet Colleges": Policies, Problems, and Prospects of Online Higher Education in China', *EDUCAUSE Review*, 41: 48–59.

4 Private higher education in China

Problems and possibilities

Fengliang Li and W. John Morgan

Introduction

The Chinese higher education system has been undergoing a rapid and far-reaching transition (Min, 2005) with the changes driven particularly by accelerating globalization (UNESCO, 2003). One of the most fundamental changes is that private higher education, which began from zero, has very quickly assumed an increasingly important role in the expansion of higher education. However, although private higher education has achieved tremendous developments since its establishment, it has been thwarted by many problems or challenges, with poor educational quality and unemployment problems among graduates prominent. These are important social issues and have even been of political consequence for government, since complaints or distrust of private universities or colleges may cause public disquiet and even conflict.[1] However, there are some problems that might not be so obvious and direct, but are gradual and profound, with social stratification of private higher education a key example. There are only a few studies on access to high quality private higher education and the acquisition of labour market qualifications by underprivileged groups, since many people thought equality was *not* an important aim for private higher education in China. This is an issue that we have addressed previously and the present chapter builds on that discussion and does so with permission (Li and Morgan, 2008).

Levin (2004) has also argued that achieving equity was one of the main purposes of public education policy and that it was also applicable for private education. The question is, does Chinese private higher education improve social equity or not? The current answer may be that in China private higher education has been reinforcing social stratification (Lin, 2006). Will this situation continue especially with the reality of globalization, which will cause many fundamental changes for both the private higher education system internally and in its external context?

This chapter considers the interaction between Chinese private higher education and the accelerating globalization, especially focusing on underprivileged groups. Using empirical studies on related topics, we will review the current situation and suggest some trends. The structure of the chapter is as follows. First, we describe the features of Chinese private higher education. Secondly, we present empirical findings on social stratification in the current private higher education

system. Thirdly, we synthesize different viewpoints about the impacts of globalization on Chinese private higher education. Fourthly, we forecast the impact of this process on access to high-quality education and the acquisition of labour market qualifications by the underprivileged. Finally, we draw some conclusions and provide suggestions on further research.

Features of Chinese private higher education

In China, private higher education is a rather complicated field of practice usually called *Ming-ban* higher education and there is *no* consensus in China on a definition of private higher education currently. Different scholars, local governments and even regulations use different definitions. Some scholars even argue that the definition of private higher education or *Ming-ban* higher education is unclear also in the *Education Act* (MoE and SIES, 2003: 142). In this chapter, we will not discuss or distinguish the definition of private higher education or *Ming-ban* higher education in detail. Instead, we define private higher education simply as the counterpart of, and alternative to, public higher education. Therefore private higher education as considered in this chapter excludes the privatization of public higher education, continuing education, distance learning, training, lifelong education, and so on. Its students comprise only young people who have finished secondary education or some adult students who previously were excluded from public higher education.

After more than 20 years of development Chinese private higher education can boast many achievements. Before 1980 there were no private universities or colleges in China, but by 1999 there were 43 private degree granting universities or colleges, without considering more than 1,000 other private higher education institutions (UNESCO, 2003); by 2006, the number of private higher education institutions with degree granting powers had increased to 278 (MoE, 2007). Although there are a large number of private higher education institutions, their standards and reputations are mixed and irregular. Furthermore, the distribution of private higher education institutions is distinguished not only in type, but also in geography. Most private higher education institutions are technical or professional colleges and almost none are research universities, since the Chinese government restricts private higher education institutions to the college level (Yan, 2005).

As for geographical distribution, Shanghai, Beijing, Shanxi, Shandong and Henan are the five provinces or municipalities in which most private colleges and universities are located (Yan, 2004); more than 60 per cent of private higher education institutions are in these five areas. This is consistent with the distribution of economic strength. In other words, the higher the level of provincial economic development, the higher provincial private higher education is developed (Yan, 2003).

There are several reasons for the concentration of private higher education institutions in prosperous areas. First, there is more investment available in such areas; secondly, local governments in prosperous areas have a stronger incentive to improve private higher education; thirdly, there are more public education

resources for private higher education to draw upon; fourthly, there are more potential private higher education students.

Unlike some developed countries, the USA for example, in China private universities or colleges are non-profit organizations in name only. Apart from investors, scholars and government officials argue that investments in private higher education should expect reasonable economic profits or returns. There are obvious economic characteristics in the Chinese private higher education system. It does not mean simply that the income of private higher education institutions comes mainly from students' tuition fees, which account for about 80 per cent of the total income (MoE and SIES, 2003: 89). When we investigate who is operating private higher education institutions in China, it is very easy to understand that they are *not* pure non-profit organizations. Not only are many presidents or chancellors of private higher education institutions formerly entrepreneurs or government officials; but also many private higher education institutions are subordinate to big private enterprises, such as Jili University, which is subordinate to the Jili Auto Company. However, there are some non-profit private colleges established by NGOs and quasi NGOs, for example the democratic political parties (MoE and SIES, 2003: 89).[2]

Whether private higher education institutions are non-profit or for-profit organizations, generally speaking, they are easily influenced by government policy and by other social factors (Yan and Wu, 2005). For example, from the mid 1990s the Ministry of Education of China (MoE) began to allow private higher education institutions that did not have national recognition to prepare students for the Higher Education Qualifications Diploma Examinations (*Gao Deng Jiao Yu Xue Li Wen Ping Kao Shi*). Many private colleges and universities became prosperous businesses because of this policy. However, in 2004, the MoE stopped this policy. Soon many private colleges and universities could not recruit enough students to survive. It should be emphasized that this happened after the People's Congress adopted the first law in 2002 aimed at encouraging private higher education. It means that, despite legislation on private higher education, policy changes from educational administrative departments still have a fundamental impact on private universities or colleges (Yan, 2005). Therefore, although there are many new private higher education institutions opening each year; there are, at the same time, many institutions closing down (MoE and SIES, 2003: 202).

Furthermore, compared with its public counterpart, private higher education is still lagging behind in areas such as educational quality and recruitment sources. Generally speaking, private institutions can only begin to recruit new students after the regular public institutions have done so, let alone the key universities. As for educational quality, the qualifications and standard of the teacher is a very important proxy. There are more part-time teachers in private higher education and the age distribution of full-time teachers is concentrated into those 'younger than thirty' and those 'older than sixty' (MoE and SIES, 2003: 202).

It is important to note that the main reason why government encouraged the development of private higher education was to address the problem of inadequate public funding. As a consequence, compared with private higher education in

many other countries, the goals of Chinese private higher education are rather narrower, and pay little attention to educational quality and social equity (Yan, 2005). When the scale of public higher education was relatively small, education quality was *not* an important issue for private higher education, since it could still recruit high school graduates of some ability, and recruit enough qualified teachers. However, following the great expansion of public higher education and the accompanying expansion of private higher education, educational quality and social equity have become issues for serious consideration in both public and private higher education. For example, the rapid expansion of higher education enrolments in China has had the unfortunate effect of increasing graduate unemployment. The unemployment of graduates of private higher education is particularly noticeable and has raised public concern about educational quality and social equity and has limited the further development of private higher education.

In the next section we will consider evidence of the social stratification effects of private higher education in China, especially in the circumstances of the expansion of both public and private higher education.

Social stratification and private higher education

Only recently have the social stratification effects of Chinese private higher education attracted academic interest. There are at least two reasons why this issue attracted less attention in the past. First, before the turn of the century, private higher education only occupied a rather small proportion of the whole higher education system. Secondly, at that time, generally speaking, only a few students from wealthy families could access private higher education.

In fact, private higher education has been playing a role in social stratification. Based on a case study of private higher education in Xi'An, a city whose private higher education institutions are well-known throughout China, Shen and Yan (2006) found that, compared with those who could not access any kind of higher education, those who could pay for private higher education came from more privileged family backgrounds. This is not surprising since the tuition fees of private higher education are rather expensive. Furthermore, to a great extent, private higher education students have a more privileged family background than their counterparts in public higher education. Again, this is not surprising since the tuition fees of private higher education institutions are higher than those of their public higher education counterparts.

In fact, private higher education students have to pay not only high tuition fees but also other living costs that public higher education students need *not* pay or they just pay a relatively small percentage, such as for accommodation, medical services and so on. It means that private higher education students have to pay more than their counterparts in public higher education. Meanwhile, there are many different kinds of preferential policies for underprivileged higher education students, such as free tuition or accommodation, fees reduction, scholarship, stipend, or student loan. However, private higher education students are not eligible for the preferential policies outlined above. Private higher education

students cannot even enjoy transportation fees reduction during holidays like their counterparts in public higher education institutions. However, as most private higher education students are from well-off families, it is less of a problem since such families are able to afford the extra expenses of private higher education.

But the situation has changed recently. With the expansion of private higher education, there is new pattern of social stratification related to private higher education. In 1999, both private higher education and public higher education expanded greatly. But the consequences were different. The average tuition fees for students in public higher education increased significantly while those for their private higher education counterparts decreased (Wei, 2007). There were at least two reasons, both related to competition. One was that public higher education institutions recruited more high school students; the other was that there were more private higher education institutions competing for recruitment.

In any case, as Shen and Yan (2006) found, it was not only high-income families that sent their children to private higher education, but also low-income families, although the costs were still significant. As a consequence, social stratification *within* the private higher education system has risen. Students from low-income families have more opportunities to receive private higher education because of expansion. But they can only enter into those private colleges or universities with lower prices, that is, with lower educational quality. Again, to a great extent, students from low-income families are also inclined to choose low-quality programmes or majors, since prices for different programmes or majors differ even *within* the same private college (Shen and Yan, 2006). Thus within the Chinese private higher education system, family backgrounds have a significant impact on not only students' educational quality but also on their education plan. Shen and Yan (2006) found that, after some other factors were controlled, students from higher-income families were more likely to plan to study abroad or pursue higher educational level, i.e. from college education to university education.

Why do low-income families still want to invest in private higher education, although they have to pay considerable costs for private higher education, which does not have a good reputation for quality, and even to receive private higher education with lower quality? The most important reason is that the returns to higher education have been increasing tremendously since the early 1990s (PKU GSE, 2005). However, with the expansion of higher education, both public and private higher education graduates have been facing difficulties in job search and private higher education graduates are at a disadvantage.

Wu (2003) and Bao (2006a, 2006b) compared graduates' job search between private and public colleges and found that private college graduates were at a disadvantage and suffered more difficulties in the job market. Based on data from a nation-wide higher education graduates survey in 2003, Wu (2003) found that private higher education graduates applied more times than public higher education graduates before they got job offers and the unemployment rate of private college graduates was also significantly higher than that of public higher education graduates after personal characteristics had been controlled. Therefore, there are two different domains of job location respectively related to private and public

higher education graduates, and the difference between them is fundamental. Bao (2006a) compared the occupational domains of both private and public higher education using data from a survey of graduates in post-secondary education in Chinese coastal areas in June 2003. It was found that private higher education graduates began to change their job destination so as to avoid competing with their counterparts from public higher education. More private higher education graduates found jobs in the non-urban job market rather than in the urban job market. About one half of private higher education graduates (43 per cent) found employment jobs in the non-urban areas and the corresponding rate for their public counterparts was only 10 per cent. More than one half of the private higher education graduates (55 per cent) found their first jobs in the service industry, and only 20 per cent of graduates from public higher education found their first jobs in the service industry.

Not only did private higher education graduates choose a less competitive job market than those from public higher education, but also jobs with worse terms and conditions after industries and areas had been controlled. Bao (2006a) found that there were more graduates from private higher education who had to accept jobs with a non-institutional contract. The rate of the former was 41 per cent and of the latter 14 per cent. Furthermore, the job-unmatched rate of private college graduates was significantly higher than that for their public education counterparts. More seriously, the average starting wage of private higher education graduates was also significantly lower than that of their public counterparts (Wu, 2003).

Like educational quality, social stratification in the labour market exists not only in comparing public and private higher education institutions but also within the private higher education system. Bao (2006b) investigated the impacts of family backgrounds, such as residential origin, paternal education and family income, on the probabilities of private higher education graduates' successful job search. Empirical results showed that among the private higher education system, graduates from an underprivileged family background were also at a special disadvantage during job search. After some other factors were controlled, the probabilities of getting jobs in urban areas were significantly 0.5 greater for those from urban areas than the probabilities for those from non-urban areas. With the standard of paternal education increasing each year, the probabilities of getting jobs in urban areas also significantly increased 0.89 times (Bao, 2006b).

Although the knowledge or skills acquired by private higher education students can overcome the disadvantage of the job search caused by family backgrounds (Bao, 2006b), it cannot really compensate since, as mentioned above, it is more difficult for underprivileged students to access high quality private higher education. Therefore, it means there are two types of social stratification within the higher education system in China. These are the public versus private and the privileged versus the underprivileged. Within the private higher education system, underprivileged students will not only have fewer opportunities to access private higher education of high quality, but also those who study at low-quality private higher education institutions are still at a disadvantage during their job search.

Globalization and Chinese private higher education

The impact of globalization has been a hot topic in recent years and will continue to be so in future because globalization is a double-edged sword. On the one side, it has brought benefits to both the developed countries and developing countries, including growth in the quantity of productive assets, cross-border investment and economic growth. On the other side, threats have come from globalization including an increase in inequality, some increased poverty and social exclusion (Greenaway, 2007). This means that one apparent threat of globalization is the possible enlargement of social stratification. It seems that the trend of globalization is irreversible and social stratification exists in Chinese private higher education. In these circumstances, what will increasing globalization bring to the development of private higher education in China, especially for underprivileged groups? In this section, we consider the direct threats and opportunities of globalization on Chinese private higher education, which will have indirect but profound influences, both positive and negative, on social stratification.

In China, the influences of globalization on higher education are slow and small. However, compared with public education, they are bigger for private education, especially for private higher education (Xu, 2001). Globalization has caused some fundamental changes in the development of Chinese higher education in many aspects and the impacts of globalization will spread and deepen. We describe mainly those changes that will have either positive or negative impacts on social stratification. When we mentioned the geographical concentration of private higher education, we suggested several important causes, including economic, governmental, educational support and social environment, which have positive impacts on the development of private higher education. Apparently and generally speaking, with globalization the four conditions given above will improve significantly.

With globalization, the Chinese economy will develop especially in the private economic sectors, which are the main foundations of private higher education currently. Thus the financial environment of private higher education will be markedly better, while the financial sources will be more diverse since the capital market will also be globalized. Furthermore, we want to emphasize the effect of changes in governmental support and in the social environment on private higher education. We said earlier that private higher education institutions were easily influenced by governmental policy. However, with globalization, governmental influences or interference will gradually become more indirect and weaker, since more foreign investments or organizations will be involved in private higher education in China and their appearance will temper governmental influence (Morgan and Tuijnman, 2009). In fact, the entrance of the World Trade Organization hastened the birth of the first legislation aimed at encouraging private higher education.[3] This acts as a new social game rule to regulate and promote new relations and interactions between government and private higher education (Pan and Law, 2006). Furthermore, globalization will continually improve the market economy, free trade and fair competition, which will change the relationship

between private higher education and educational administration. Therefore, the regulations by government of private higher education should be in accordance with market rules and will not be so random and rigid (Wang, 2002). The social environment will also be better since the traditional idea that 'public is senior and private is inferior' (g*uan zun min bei*) will change with globalization. Therefore, the reputation of private higher education will improve from the perspectives of both government and society (Pan, 2001).

Besides these optimistic views on governmental support and the social environment, there are also pessimistic viewpoints. It is expected that private higher education can get 'national treatment' in the same way as public education, as more foreign private higher education organizations will come to China with globalization (Morgan and Tuijnman, 2009). However, many domestic private higher education institutions are still afraid that foreign investments or institutions may receive 'supra-national treatment'.[4] Namely, governmental preferential policies are only applied to foreign institutions or Sino–foreign cooperative institutions with globalization so that domestic private higher education institutions cannot compete with foreign institutions or Sino–foreign cooperative institutions, since both government and society prefer the latter.

With globalization, whether foreign investment or institutions receive such 'supra-national treatment' or not, there is no doubt that financial competition both in students' tuition fees and investments will grow between domestic and foreign private higher education institutions. First, more and more foreign or cooperative institutions will attract students as globalization progresses. Since tuition is the lifeblood of domestic private higher education institutions, they will face rigorous competition. Secondly, domestic investment will also go across to foreign or Sino–foreign cooperative institutions. Then domestic private higher education institutions will experience a severe financial environment, especially for those institutions with a lower reputation that provide private higher education mainly for underprivileged students. The bankruptcy of private colleges or universities might become more frequent and an even stronger incentive towards pursuing profit. This is to the disadvantage of students, especially already underprivileged ones.

Although there will be serious competition among private higher education institutions which aim for economic returns in the process of globalization, it is also expected that more NGOs (non-governmental organizations) or IGOs (intergovernmental organizations) will be involved in Chinese higher education; since there will be fewer government regulations on NGOs or IGOs with globalization. For example, Dr. Velez, who used to be the Education Sector Manager for the China programme in the World Bank, claimed that about 75 per cent of educational projects were about private education (Velez 2003). Many other similar organizations, such as the Ford Foundation and UNESCO also have a positive attitude towards being involved and, with such help, more non-profit private higher education organizations will be established gradually.

Certainly the Chinese government, which used to control a highly central planned economy, is concerned about the involvement of NGOs or IGOs. Mr. Tao Xi Ping, a member of the National People's Congress Standing Committee,

warned that with globalization, through international educational activities including NGOs and IGOs, foreign ideologies, values, culture and life style would possibly cause some unwanted results or influences (Tao, 2002). This worry has been reflected in the new regulations or rules. New regulations promulgated by the State Council, now known as Sino–Foreign Cooperative School Rules (*Zhong Wai He Zuo Ban Xue Tiao Li*) stated that foreign hostile forces should be prevented from using educational exchange activities for political, religious, ideological and cultural infiltration.

From the arguments above, we can expect that globalization may bring a better economic context, more lenient governmental regulations, and more respect from consumers for Chinese private higher education. Meanwhile, there will be more serious competition from different kinds of higher education institutions including domestic, foreign and cooperative organizations. In facing such competition the Chinese private higher education system needs to be more flexible, while both investment in and governmental regulation of private higher education might be more discreet (MoE and SIES, 2003: 202). However, following increasing globalization, the optimistic viewpoint is that more NGOs and IGOs will also contribute to develop pure non-profit private higher education in China.

Forecasting the trend of social stratification

China has benefited from the Open Door policy and is facing globalization with a positive attitude, economically, socially and politically. It is realistic to expect that globalization will have both positive and negative impacts on the development of Chinese private higher education and this process will continue for a long period. Consequent on its expansion, social stratification has appeared in Chinese private higher education. What further impact will globalization bring to the current social stratification in Chinese private higher education? Since private higher education has a relatively short history, we cannot test it empirically, but we can make a forecast based on comparable evidence or cases.

Globalization itself represents both threat and opportunity. It is not, therefore, surprising that we expect that, on one hand, globalization will in some ways help to alleviate social stratification in Chinese private higher education. On the other hand, social stratification generally will be aggravated with globalization. Since underprivileged groups are at a disadvantage in both access to high quality private higher education and the acquisition of labour market qualifications, we forecast both positive and negative impacts of globalization in both aspects.

Why will underprivileged groups have more difficulty than others in accessing high quality private higher education with globalization? There are two hypotheses of educational equity during educational transition. One is *Maximally Maintained Inequality* (MMI) (Raftery and Hout, 1993). This means that educational expansion does not necessarily eliminate educational stratification or inequality; and only the demand for a given level of education is saturated for the upper classes with expansion; class differences in this educational attainment will decline. The other hypothesis is *Effectively Maintained Inequality (EMI)* (Lucas

2001). This means that if quantitative differences almost disappear, the socio-economically advantaged will try their best to obtain qualitative advantage; namely, with educational expansion, for all education, equality will improve, but for high-quality education, inequality will remain or even increase.

Ding (2006) tested the two hypotheses using data from a nationwide urban household survey in 1991, 1995 and 2000 by National Bureau of Statistics of China (NBS). Empirical findings show that with rapid expansion of higher education[5] and increasing tuition, the overall equality of higher education opportunity has been improved by embracing more underprivileged students from lower socio-economical family backgrounds into the lower-quality higher education institutions,[6] which supports the MMI hypothesis. However, students from higher socio-economic statuses have benefited more in high-quality universities with the expansion, which support EMI hypothesis.

Although the findings above relate to public higher education, we argue that they are also applicable to private higher education since social stratification has accompanied its expansion. There is no doubt that globalization will improve the economic, political and social supports for Chinese private higher education; therefore, it is predictable that private higher education will continue to expand. Furthermore, tuition fees will also increase since more investment will participate to pursue profit. Then, with the same logic as for overall private higher education, students from underprivileged backgrounds may have more opportunities to access private higher education. However, when the quality of private higher education is considered, underprivileged groups may find it more difficult to obtain private higher education of high quality, since most such private higher education institutions, including foreign and Sino–foreign cooperative institutions, will be limited to big cities (Chen, 2002); at the same time, generally speaking, unlike public higher education, higher quality education is more expensive.

There are also optimistic prospects for the involvement of NGOs and IGOs. For example, UNESCO continues to give a high priority to efforts to broaden access to higher education including private higher education, taking into account the particular needs of disadvantaged groups including women, ethnic minorities and populations located in remote and isolated areas (UNESCO, 2003). The World Bank also claimed that it would give a much higher priority to social equity when it undertook higher educational projects in China (World Bank, 2002). In China, the development of NGOs and IGOs will accompany globalization. Therefore, we forecast that, to this extent, disadvantaged people will have more opportunities to receive private higher education of high quality.

As for employment of underprivileged graduates from private higher education, there are also two extreme possibilities. Empirical findings show that the impact of family background on the probabilities of a successful job search and starting wages are not significant for graduates from key public universities; but family background has a significant impact on the acquisition of labour market qualifications for graduates from lower-quality higher education institutions (Li and Morgan, 2008). It means that educational quality may compensate for the employment disadvantage of family background. Under globalization, if social

stratification of access to high-quality private higher education increases, then underprivileged students will not only have fewer opportunities to access private higher education of high quality, but also those who study at low-quality private higher education institutions will remain at a disadvantage during the job search. If with the help of NGOs and IGOs, more pure non-profit private higher education institutions of high quality become established, especially for underprivileged groups, then, the impact of family background on the acquisition of labour market qualifications will decrease in these high-quality private universities and colleges.

In summary, if under globalization and more foreign investment with a profit motivation entering Chinese private higher education, private higher education will pay more attention to profit and efficiency rather than to social equity, then the current social stratification related to private higher education will worsen; on the other hand, if there is more involvement of NGOs and IGOs, which really help underprivileged groups to receive high-quality private higher education, Chinese private higher education will contribute more to increasing social equity (Levin 2004).

Conclusion

There are some fundamental differences between Chinese private higher education institutions and their non-profit counterparts in Western society. Chinese private higher education has special features: investment is favoured over donations; entrepreneurs always expect economic returns when they invest in private higher education; private higher education institutions are easily influenced by government policy; compared with public higher education, it has a poor social reputation while its tuition costs are higher; and with expansion, social stratification has risen.

Recently, globalization has exerted an increasing impact on the development of private higher education in China. It definitely brings both threats and opportunities for social stratification related to private higher education. Since both globalization and Chinese private higher education are rather complicated topics, it is not surprising that both pessimistic and optimistic tendencies will develop during a certain period or within a certain area. Although it seems that commentators on Chinese higher education appear to be optimistic about the possible impact of globalization (Rui, 2001), we still warn against the likelihood of social stratification and suggest that the Chinese government, NGOs, IGOs, practitioners, donors and investors work together to use the opportunity of globalization to build a more socially harmonious private higher education system in China. We argue that, during this process, NGOs and IGOs can and will play a more and more important role in developing Chinese private higher education. Therefore, in the near future, we should pay attention to the relationship between NGOs or IGOs and the Chinese government. How they interact or cooperate will determine the direction of social stratification and the creation of a harmonious society in China generally.

Notes

1 For example, there were many bankruptcies of private colleges and some of them provoked public demonstrations or protest by students.
2 In China, there are eight non-Communist or democratic parties. They are not in power, but they participate in government and political affairs.
3 Interview with Professor Yan Fengqiao by the first author, October 2005.
4 Interview with Mr. Huang Teng by the first author, June 2006. Mr. Huang Teng is president of a well-known private higher education university in China.
5 In the datasets we cannot distinguish public higher education and private higher education. But certainly the samples from private higher education are very small.
6 With expansion, both public higher education and private higher education are facing the same problem of educational quality.

References

Bao, W. (2006a), 'The development of private higher education in China: Change and response', International Seminar on Frontier of Private Higher Education Research in East Asia paper, Japan: Tokyo.

Bao, W. (2006b), 'The private higher education and employment: Emergence of the new job market', Chinese Economics of Education Association Annual Conference (2006) paper, China: Tsingdao (in Chinese).

Chen, Z. (2002), 'The impact of the WTO on Chinese education and our strategies', *China's National Education*, 2: 4–7 (in Chinese).

Ding, X. (2006), 'Expansion and equality in Chinese higher education', *Economics of Education Research (Beida)*, 2006 (2). Online at http://www.gse.pku.edu.cn/BeidaEER/pdf/060201.pdf (in Chinese).

Greenaway, D. (2007), 'Increasing globalization: Threat or opportunity?' 18th CEA (UK) annual conference, presented in Nottingham, UK, 16 April.

Levin, H. (2004), 'Opportunities of and challenges to educational privatization in China', Human Resources and Educational Development Conference, presented in Beijing, 26 August.

Li, F. and Morgan, W.J. (2008), 'Private higher education in China: access to quality higher education and the acquisition of labour market qualifications by low-income students', *Education, Knowledge & Economy*, 2 (1): 27–37.

Lin, J. (2006), 'Educational stratification and the new middle class', in P. A. Gerard (ed.), *Education and Social Changes in China: Inequality in a Market Economy*, New York: M.E. Sharpe, pp. 179–198.

Lucas, S.R. (2001), 'Effectively maintained inequality: Education transitions, track mobility, and social background effects', *American Journal of Sociology*, 106: 1642–1690.

Min, W. (2005), 'Economic transition and higher education reform in China', *PKU GSE Newsletter*, 089. Online at http://www.gse.pku.edu.cn/jianbao/200517.htm (in Chinese).

Ministry of Education of China (MoE) (2007), *China educational statistical yearbook 2006*. Beijing: People's Education Press (in Chinese).

Ministry of Education (MoE) and Shanghai Institute of Educational Science (SIES) (2003), *Green paper on non-governmental education in China 2002*. Shanghai: Shanghai Education Press (in Chinese).

Morgan, W.J. and Tuijnman, A.C. (Guest Editors) (2009), *European Journal of Education: Research, Development and Policy*, Special Issue, 'Chinese–European Cooperation in Education', 44 (1), March.

Pan, D. (2001), 'The WTO and the development of *Ming-bang* higher education', *Research on Education of Yunnan*, 19: 13–15 (in Chinese).

Pan, S. and Law, W.W. (2006), 'Legalizing education: the role of law in the regulation and deregulation of China's private education', *Education and the Law*, 18: 267–282.

Peking University, Graduate School of Education (PKU GSE) (2005), 'Education and employment survey of Chinese urban residents in 2004 (a)', PKU GSE Newsletter, 092. Online at http://www.gse.pku.edu.cn/jianbao/200522.htm (in Chinese).

Raftery, A. and Hout, M. (1993), 'Maximally maintained inequality: Expansion, reform, and opportunity in Irish education 1921–75', *Sociology of Education*, 66: 410–462.

Rui, Y. (2001), 'China's entry to the WTO and higher education', *International Higher Education*, 24: 9–10 (in Chinese).

Shen, Z. and Yan, F. Q. (2006), 'The impact of social stratification on stratification of higher education: An empirical analysis of student's family backgrounds in Xi'An *Mingban* higher education', *Economics of Education Research (Beida)*. Online at http://www.gse.pku.edu.cn/BeidaEER/pdf/060204.pdf (in Chinese).

Tao, X. (2002), 'The WTO and Chinese education', *Higher Education Exploration*, 2: 13–17 (in Chinese).

UNESCO (United Nations Educational, Scientific and Cultural Organization) (2003), *Higher Education in Asia and the Pacific 1998–2003*, Paris: UNESCO.

Velez, E. (2003), 'World Bank and private education', *Policy and Management of Private Education in China Workshop*, presented in Beijing, 20 February.

Wang, J. (2002), 'Accession to the WTO and speeding the legislative process of *Mingban* education', *Academic Exploration*, 5: 100–102 (in Chinese).

Wei, X. (2007), *The equity and efficiency of Chinese Educational Finances (project report)*, Beijing: Peking University (in Chinese).

World Bank (2002), *Constructing Knowledge Societies: New challenges for tertiary education*, Washington, D.C.: World Bank.

Wu, S. (2003), 'A comparison of students' costs and employment between *Gongban* and *Mingban* colleges', *Economics of Education Research (Beida)*. Online at http://www.gse.pku.edu.cn/BeidaEER/pdf/030116.pdf (in Chinese).

Xu, G. (2001), 'The WTO and the development of Chinese civilian-run higher education', *Journal of Huanghe Science and Technology University*, 3: 29–33 (in Chinese).

Yan, F. (2003), 'Factor analysis on the proportions of *Mingban* education at the same educational level', Chinese Economics of Education Association Annual Conference paper, Beijing (in Chinese).

Yan, F. (2004), 'An analysis of the factors influencing the proportion of private education in the educational system at the same level', *Educational Research*, 25: 64–70 (in Chinese).

Yan, F. (2005), 'Economic analysis of private education policy in China', *Educational Research*, 26: 59–63 (in Chinese).

Yan, F. and Wu, P. (2005), 'Private higher education research in China: Retrospect, comparison and prospect', *Journal of Higher Education*, 26: 45–50 (in Chinese).

Part II

Expansion and its consequences

5 Thirty years of reforming China's higher education funding mechanism

Xiaohao Ding, Fengliang Li and Yuze Sun

Introduction

After the founding of the People's Republic of China in 1949, post-war recovery in every aspect of national affairs was the top priority for the new communist government of the war-ravaged country. In higher education the Chinese government established a Soviet-oriented system based on the planned economy. As a consequence, the principle of central government planning, state organization and public funding was adopted. This meant that China developed a centrally prescribed higher education system, under which students were not required to make any direct or personal contribution to the costs of their tuition.

This prevailed for a long time. It was not until 1977 with the resumption of a college entrance examination that a process leading to the reform of the higher education system and its funding was begun in China. In a situation where the demand for highly qualified and skilled human resources was very great and the average national income was relatively low, higher education took on the function of not only facilitating the national economic development but also, based on the limited *per capita* disposable income rate, filling the talent gap caused by the Cultural Revolution. In practice, higher education, free to students and financed from the government budget, did help to groom significant numbers of talented people for the socialist construction.

However, as changes both to the economic and to the education systems progressed and the demand for higher education increased, the resource allocation of the planned economy was also obliged to adjust to the market mechanism (Min, 2005). It was realized that the dominant funding mechanism for higher education could not cope any more with the emerging demand for higher education. In 1984, China's central government put the reform of higher education on its agenda. The reform of the funding mechanism for higher education was essentially a reform of the national resource allocation for higher education and was the cornerstone that supported related reforms in the higher education system generally. In short, the effectiveness of the changing funding mechanism had repercussions for a series of educational reforms throughout the entire education system. The next section will consider how this developed in practice.

The funding mechanism since the open door policy

The re-definition of responsibilities among the various administrative levels

The responsibilities between central government and local governments for fiscal allocation were redefined several times during the 1980s. The main aim was to allow local governments the freedom of managing funds by decentralizing the former financial system under which national expenses and income had been solely controlled by the central government, and to implement the policy of: '… drawing boundary lines among levels of government' (*Hua Fen Shou Zhi, Fen Ji Bao Gan*) and '… eating at the kitchen table in their own houses' (*Fen Zao Chi Fan*), which translated into the management of income and expenses at the respective administrative levels.

In order to build the higher education system, The *Outline of Reform and Development in Chinese Education* (*Zhong Guo Jiao Yu Gai Ge He Fa Zhan Gang Yao)* (State Council of China, 1993) proposed that the newly established education management system should be consolidated. This meant that the boundary line was drawn clearly between central government and provincial government, with different levels of administration. This demonstrated the intention to streamline the government through decentralization or subsidiarity. As the central government began to transfer the tasks of providing and funding higher education to lower administrative levels, local governments were motivated, indeed compelled, to fund their respective higher education sectors themselves and began to take on more responsibilities; to show more local initiative; and the acquisition of more resources for higher education was therefore made possible.

Changes in the government method of appropriation

The impact of the reform in state financing for higher education was not only manifested by the re-definition of rights and responsibilities at all administrative levels, the amount of government funding and the appropriation structure, but also by a change in appropriation method. Government funding for higher education had been appropriated according to the principle of: '… base appropriation plus additional subsidy' (*Ji Shu Jia Fa Zhan*) until 1985 when: '… overall funding cap plus earmark subsidy' (*Zong He Ding E Jia Ding Xiang Bu Zhu*) was proposed for the appropriation of funds for higher education. This new method motivated higher institutions to better utilize their money and to improve their capacity for managing funds responsibly. This reflected higher institutions' development as cost-driven operations and improved the transparency and fairness of money allocation.

Beginning in the1990s, the central government initiated many large projects for higher education. At the end of 1991, Project 211[1] was submitted to the State Council of China and implemented thereafter. This project was a milestone, initiating the philosophy of 'management by objectives' in higher education; besides, it

was an iconic event through which the government increased input in higher education and especially in prestigious institutions. Since then, large earmarked projects, including Project 985,[2] kept mushrooming, which meant dedicated allocation of funds for specific higher education projects increased, albeit gradually.

The establishment of a cost compensation mechanism in HE and its further development

Until the mid 1980s, higher education in China was funded solely by the central government. The higher education institutions themselves didn't charge any tuition fees directly to their students; and, furthermore, a considerable number of bursaries was allocated to students as allowances. This was also known as the 'commonwealth grant subsidy' (*Ren Ming Zhu Xue Jin*). China's rapid social and economic development meant that knowledge and skills were much in demand by all sectors in society and popular demand for access to higher education also surged. The central government was faced with enormous pressure to expand higher education. However, the available national budget remained limited and a system of cost sharing and cost compensation became increasingly necessary.

In 1984, the Chinese government decided to recruit industrial trainee students, supported financially by enterprises to which they are then contracted to work, and self-financed students. As announced in the Decision of the Reform of the Education System of the Central Committee of the Chinese Communist Party (*Zhong Gong Zhong Yang Guan Yu Jiao Yu Ti Zhi Gai Ge De Jue Ding*) (Central Committee of the Chinese Communist Party, 1985), the government decided to change the system of 'commonwealth grant subsidy' and proposed a reform in the payment of miscellaneous and training fees. The publication 'The Outline of Reform and Development in Chinese Education' (*Zhong Guo Jiao Yu Gai Ge He Fa Zhan Gang Yao)* in 1993 (State Council of China) provided a roadmap for educational reform and development in the 1990s. In this document, the government declared that students at the non-compulsory education level should contribute tuition fees and other miscellaneous fees. This provided the basis of the system of multiple funding streams for higher education. In 1994, the government piloted the new funding system in 37 higher education institutions in an attempt to integrate the self-financing and the public-financing modes. The mixed-mode integration project was completed by 1997, by which time all higher education students were required to meet tuition fees themselves. At this point the cost compensation mechanism became an essential component of higher education funding in China.

While introducing tuition fees based on a cost compensation mechanism, the system of student subsidy was enhanced also, helping low-income students to continue with their education. The system comprised scholarships, allowances, loans, part-time jobs, fee attrition and subsidies, offering necessary support for students from lower-income families. 'Scholarship' refers to the money offered by the government, by enterprises or even by sponsoring individuals. It is used to reward students recognized as having both a good civic attitude and

academic excellence. 'Allowance' refers to financial aid to help with the living costs of students. 'Loans' refer to student loans issued by the State, but which must be re-paid. 'Part-time job' refers to job opportunities provided by the higher education institutions for students from low-income families: an interesting aspect of the Chinese system. 'Fee attrition' refers to reducing tuition fees for economically deprived students. 'Subsidy' refers to earmarked funds allocated by the State or by associations for students from low-income families.

The expansion of self-fundraising in HE

The State's encouragement of higher education institutions to raise funds based on their specific strengths was another important part of the reform of the higher education financial system. The Decision of the Reform of Education System of the Central Committee of the Chinese Communist Party (*Zhong Gong Zhong Yang Guan Yu Jiao Yu Ti Zhi Gai Ge De Jue Ding*) (Central Committee of the Chinese Communist Party, 1985) stated that the higher education institutions were entitled to use, besides the government funds and investment designated for infra-structure construction, any money gathered by themselves. 'The Outline of Reform and Development in Chinese Education' (*Zhong Guo Jiao Yu Gai Ge He Fa Zhan Gang Yao*) issued in 1993 further pointed out that tuition fees, institution-owned corporations, hi-tech enterprises, social service, social endowment, financing and loans should be the main funding streams besides government funds (State Council of China, 1993).

Higher education institutions, through various forms of fund-raising and surplus acquisition used their potential in terms of both human resources and technological innovation to achieve this. Moreover, technology development activities, technology consulting and training programmes enabled higher education institutions to make new breakthroughs in teaching and research.

The development of the private funding system

The growing demand for higher education and relatively limited public resources left a market gap that private higher education, based on the market mechanism, attempted to fill as an efficient means of attracting funds from sources other than from the State (Li and Morgan, 2008; see also Chapter 4). As stated in the Decision of the Reform of Education System of the Central Committee of the Chinese Communist Party (*Zhong Gong Zhong Yang Guan Yu Jiao Yu Ti Zhi Gai Ge De Jue Ding*) issued in 1985, the government decided to untie the restrictions on non-government funded colleges such as community colleges and private colleges (Central Committee of the Chinese Communist Party, 1985). As to such non-government funded colleges, 'The Outline of Reform and Development in Chinese Education' (*Zhong Guo Jiao Yu Gai Ge He Fa Zhan Gang Yao*) (1993), set out a guideline for private higher education governance that required: '… sincere commitment, strong support, reasonable instruction and solid management', fashioning a new higher education finance framework with

the governmental finance as the central pillar supported by those of the whole society (State Council of China, 1993). The Non-governmental Education Promotion Law of the PRC (*Zhong Hua Ren Min Gong He Guo Min Ban Jiao Yu Cu Jin Fa*), passed on 28 December 2002, approved legal rights for non-government funded education (National People's Congress of the People's Republic of China, 2002).

As to the private higher education institutions' funding mechanism, the infrastructural and operating costs were to come mainly from the students' tuition fees, supplemented by bank loans, individual loans, aid provided by parent companies and through stock dividends. In the mean time, the government followed tax attrition policies and other favourable measures for private higher education (Pan and Law, 2006; Li and Morgan, 2008; and Chapter 4). As the reform of the system progressed, private higher education was an example of a change from the old education system managed solely by the government. This was a relief for a developing country burdened and even overwhelmed by large education budget costs.

The change of financial management within HEIs

The reform of the funding mechanism in higher education required change both at the macro level related to government and at the micro level within higher education institutions themselves. Before 1980 the funding for higher institutions was planned and provided by the State completely and any balance outstanding should revert to the State at the close of the fiscal year, depriving the institutions of the freedom to use money at their own discretion. Therefore, the higher education institutions lacked motivation to improve the efficiency of financial resource use, leading to unreasonable appropriation of funds, and their potential performance was consequently undermined. In 1980, the idea of 'budget allocation and outstanding balance retained by each institution' (*Yu Suan Bao Gan, Jie Yu Liu Yong*) was proposed at a fiscal meeting for administrators organized by the Ministry of Finance. The aim was to allow each higher education institution to use its allocated government funds and to retain the outstanding balance at the end of the year for transfer to the following fiscal year. This was an important change in policy and in the process of decentralization.

However, in the late 1990s the reform changed its tack from the previous reforms that had emphasized decentralization and more freedom for higher education. At the end of 1998, another public financial reform was proposed at the national fiscal meeting. The new proposal suggested reform in fiscal budgeting for each government agency, in the single account system, in the division of income and expenses, and in the government procurement system, which had a profound impact on the fiscal operation and management in higher education institutions when implemented. Compared with the reform in the 1980s, the fiscal reform of the late 1990s was a totally different one, empowering the central government to manage higher education institutions' internal fiscal operations directly, and the autonomy, freedom and rights of each higher education institution were thereafter restrained (Kang, 2005).

Achievements of the funding reform

Reform in the higher education funding mechanism led to diverse funding streams

Early in the 1980s China had already started to search for alternative means to fund its higher education. The *Higher Education Law* (*Gao Deng Jiao Yu Fa*) passed in 1998 introduced a higher education funding mechanism, which relied on government funding as the main source supplemented by other funding streams. This formalized and legalized China's higher education funding system (National People's Congress of the People's Republic of China, 1998).

The diversity that exists now in China's higher education funding mechanism is constituted by on- and off-budget appropriations, tax revenues (collected at each administrative level) allocated for education, contributions from students and/or their families, a proportion from institution-owned corporation profits, an endowment from society, education funds, a proportion of profits earned through research and development and business co-operation in scientific research, and bank loans and interest earnings on the capital market. These may be summarized as 'budget, taxes, fees, business, society, funds, research and development, loans and interest.'

Reform in the higher education funding mechanism facilitated a widening participation

The transition from a single funding source to multiple funding sources laid a solid foundation for the development of higher education, leading to widening participation. Since reform and the policy of opening up China, higher education in the country has kept on expanding. This can be seen in the growth of gross enrolments and in the participation rate. The rapid expansion, especially after 1999, was unprecedented and, within less than a decade, China achieved transition from an elite higher education to a mass higher education (although retaining and enhancing specific elite institutions), which might have taken several decades for other countries to achieve; and this rapid expansion was definitely enabled by the change in the funding mechanism.

Reform enriched the diversity of institution type and education provision

The reform in the higher education funding mechanism increased the number and quantity of funding streams and helped accumulate considerable amounts of capital, facilitating the expansion of higher education in China. In the mean time, it enabled a series of innovations and good practice in the provision of higher education.

For example, as the reform of the system reform progressed since 1980, provincial governments were empowered gradually to manage higher education and the

number of higher education institutions at a provincial level kept increasing (see Chapter 1). Furthermore, in relatively small but economically prosperous municipalities, colleges began to be established rapidly. This expansion can be explained as a locally enabled response to market demand, as responsibility for higher education provision was transferred from the central government to lower administrative levels. Mass higher education was characterized by higher education institutions operated at a municipal level.

In a similar way, the reform in higher education funding also diversified the types of education providers. Besides public higher education at various administrative levels, there were private colleges, colleges with mixed sponsorship that included 'self-reliant colleges', i.e. financially independent colleges sheltering under the name of prestigious universities. Partnerships in higher education provision assumed various forms, such as partnerships formed by state-owned and private enterprises, by private community colleges, by academic groups in society, cooperation with research and development firms, and also co-operation with overseas institutions and international organizations (Morgan and Tuijnman, 2009). The mode of education provision also varied to a large extent, with funds coming mainly from the capital market, input from enterprises, and advance fee payment for starting up, none of which depended on government finance.

Reform improved the equal distribution of public resources

The relatively limited government finance and the growing demand for higher education made possible the transition from the solely government funded mode to diverse funding streams; besides, this transition helped to realize financial fairness on a more effective scale. Enrolment in higher education has strictly followed the selection policy based on the prestigious National Entrance Examination (NEE), providing higher education opportunities to anyone who meets the NEE standard. This is reminiscent of the former literary examinations for the recruitment of officials or mandarins in that it is open to people with ability. However, in practice, students' NEE points depend largely on the quality of their primary and secondary education, at which levels students from well-off families tend to have an advantage over their economically deprived counterparts, as educational experience is often correlated with personal and family resources. If higher education was funded solely by the government's tax revenues, then it would result in a situation where the minority would have taken up most of the resources which should have been shared more equitably equally by the whole society; in practice, low-income taxpayers have to pay the higher education bills of the affluent students.

If input from the government remained as a constant, multiple funding streams reduced the public resources allocated for each higher education student. As a result, more people would access higher education, leading to a fairer resource allocation within society as a whole. If the participation rate remained as a constant, the decline of resource proportion on average would mean less input to higher education, so that the government input could lean towards the primary

education. In conclusion, the multiple funding streams lead to a fairer distribution of public resources among citizens. In short, reform in the higher education funding mechanism improved fairness in enrolment possibilities. While increasing the aggregate amount of funds, multiple funding streams also allowed more money for the establishment and improvement of the student subsidy system. Therefore, students from low-income families could also access higher education on a more equitable basis. However, current research studies dispute whether fairness of enrolment has improved higher education quality; however, empirical studies all share the same conclusion that more students from low-income families have been able to access higher education as funding reform progresses, provided that higher education quality is not taken into account. This is obviously a difficult and contentious problem, but it could be argued that fairness of enrolment in higher education has been achieved to some degree.

Reform has motivated universities to become active participants in change

A significant aspect of the funding reform, often overlooked, could be the vigour injected into higher education institutions, now that they no longer depend on the government; consequently, higher education institutions, responsible for their own futures, are actively turning to society for partnerships and funds. Furthermore, higher education institutions, instead of being the insulated ivory towers of yesterday, have become fierce market competitors mobilizing all types of resources, strengthening the link between education and market demand, between scientific research and economic development, and improving quality and efficiency.

In addition, as higher education institutions grew closer to the market, awareness of accountability and of project management would naturally increase, changing the mechanism of internal resource allocation in attempts to achieve efficiency and to lower costs. Therefore, when the input of resources remains the same, the linkage among teaching, scientific research and social service is tightened, enhancing performance efficiency of both individual institutions and the higher education system generally.

Challenges to the reform of the funding mechanism

Insufficient fiscal appropriation and unfair allocation of resources

As 'The Outline of Reform and Development in Chinese Education' (1993) stated, the fiscal appropriation for education should have accounted for 4 per cent of total GDP by the end of the twentieth century (State Council of China, 1993). However, in practice this goal has not been met by either central or provincial governments, showing that government investment in higher education has been and still is insufficient. While the 1980s' initiative of decentralizing the higher education system gave rise to local higher education provision, it also led to a great unevenness, in terms of educational resources, among different areas across the country

(Kang, 2005; see also Chapter 1). In economically prosperous areas, higher education has relatively abundant resources; however, in less prosperous areas, resources allocated for higher education are in relatively short supply and some higher education institutions cannot manage to operate on a regular basis, let alone develop strategically. In the meanwhile, the central government has earmarked more funds as transfer payments. As a result, more such earmarked funds and unregulated administrative decisions have led to a power imbalance among governmental agencies and authoritarian decision making, which stimulates a rent-seeking phenomenon in higher education.

The potential growth of tuition fees has been restricted

Since the mid 1990s, especially following the expansion of higher education in 1999, tuition fees increased because of insufficient government funding. Since the mid-1990s, tuition fees have become the second largest method of funding higher education, next only to direct government investment. Furthermore, the percentage of tuition fees in the aggregate input to higher education keeps growing, reaching as much as 30 per cent in 2003 (MoE, 2007). This places economic pressure on average households seeking to participate in higher education. Poor students who want to continue their education have become a new concern in Chinese society. Gradually, the use of tuition fees is no longer simply a scientific calculation based on costs per student, but has become a political issue affecting social stability and harmony. It is an example of how reform of the higher education funding mechanism is faced by unexpected pressures.

Higher education institutions' debt crisis

Due to the abnormally rapid expansion of higher education since 1999, the original funding streams have not been able to meet the demand for infrastructure construction in higher education institutions. Given a situation where the government appropriation for education is limited and the funding gap caused by imbalanced demand and supply is widening, many higher education institutions have been forced to turn to loans, which include both bank loans borrowed from external financial agencies and internal debt caused by money transferred from one project to another within the institution itself. Acquiring debt has become a common fund raising method and the third main funding stream, next only to government appropriation and fee contributions from students and their families. Nevertheless, alleviating financial shortages through external and internal debts raises the financial risks thereafter. The repayment deadline adds even more pressure to higher education institutions and is a potential danger to sustainable development in higher education, both in terms of quantity and quality (Bao, 2007; Gao and Morgan, 2010).

The prospect of other funding streams is unlikely

Besides the three funding streams mentioned above, the prospect of other funding streams is unlikely. Within the total amount of funds for higher education, the portion of income contributed by institution-owned corporations and social service has been declining since the mid 1990s, lingering at 1 per cent since 2000. Moreover, the proportion of public endowment and that of profits gained by the institutions both account for only 1 per cent among the total input to higher education. In general, the funding streams of higher education are confined to government appropriation and tuition fees; in other words, the financing capabilities of higher education institutions are extremely limited. (MoE, 2007)

The funding reform in higher education launched in 1998 led to a situation significantly different from that of the 1980s, which initiated a streamlined administration and decentralized the management of higher education. The current fiscal management approaches higher education institutions in the same way it does government agencies, applying the centralized management of incomes and expenses to higher institutions. However, the centralized management of incomes and expenses requires a clear and detailed budget plan that covers a wide range of items. Because of the complexity of cost control and fiscal management in higher education, such budget plans can hardly be made clear and comprehensive. So, real-time adjustment and revision is a prerequisite based on the unavoidable uncertainties, as rigid fiscal management goes against the natural order of college operation. In other words, the series of fiscal reforms in the late 1990s has deprived the universities of the control of overall institutional budgeting and the ability to allocate short-term accumulated surpluses. This weakens the co-operation platform between higher education institutions and business partners such as financial agencies. As a result, problems are caused, such as year-end lavish spending surges and the waste of existing resources.

Further reform in higher education funding

The current priority is to consolidate the reforms of the 1980s and 1990s, to assure each higher education institution's freedom to allocate resources, to resume and align individual higher education institutions' administrative and financial power, both of which used to be compromised, and to transform higher education institutions into self-disciplined legal entities that provide education within a legal framework. A funding system with government appropriation as the main source supported by various other funding streams would enhance government commitment to higher education; rules and regulations should validate the various funding streams and supply higher education with the necessary resources and money for sustained development. At the same time, modifying the proportion of budget appropriation, reducing earmarked funds, and increasing the portion of general government appropriation are all necessary to achieve transparency and fairness so that higher education institutions can operate with necessary and adequate financial resources. Higher education institutions should also be encouraged to use cost

sharing and cost compensation mechanisms, and should construct a system of accountability that focuses on public engagement, and democratic management that caters to the internal development logic of higher education institutions.

Private higher education provision should be encouraged and the diverse types of ownership should be protected; besides, private colleges should be treated with more favourable policies and funds, so that the private and public colleges can compete at the same stage and even complement each other (Li and Morgan, 2008; see also Chapter 4). It is clear that only through transforming governmental functions and implementing a comprehensive system based on macro-management, self-discipline, public engagement and assessment, can the system of Chinese higher education develop in a well-rounded manner.

Conclusion

During the 30 years of reform of the funding mechanism in China's higher education, many positive outcomes have been achieved, such as widening participation, the diversity of institution type and of educational provision, more equal distribution of public resources, fairer enrolment and greater efficiency of both financial resources and of higher education institutions generally. However, many new issues and problems have appeared, such as an unequal allocation of resources, the rent-seeking phenomenon and the debt crisis.

We suggest that these issues be dealt with through the co-operation of governmental departments, higher education institutions and society generally. More importantly, the direction of reforms concerning the funding mechanism in Chinese higher education should be maintained so that it can contribute to a firmer foundation of financial support for the sustainable development of the Chinese higher education system.

Notes

1 Project 211 aims at the development of 100 key universities in China in the twenty-first century.
2 In May 1998, Jiang Zeming, former Chairman of The People's Republic of China, stated that China should develop several world-class universities.

References

Bao, W. (2007), 'The fund-raising mechanism of higher education in China after the rapid expansion', *Exploring Education Development*, 7–8A: 63–68 (in Chinese).

Central Committee of the Chinese Communist Party (1985), *Decision of the Reform of Education System of the Central Committee of the Chinese Communist Party (Zhong Gong Zhong Yang Guan Yu Jiao Yu Ti Zhi Gai Ge De Jue Ding)* (in Chinese).

Gao, J. and Morgan, W. J. (2010), 'The financial crisis and China's higher education: preparing graduates for their social responsibilities', *Weiterbildung*, 2: 32–35.

Kang, N. (2005), *The Innovation of Higher Education Resource Allocation System in China's Economic Transition*, Beijing: Educational Science Publishing House (in Chinese).

Li, F. and Morgan, W. J. (2008), 'Private higher education in China: Access to quality higher education and the acquisition of labor market qualifications by low-income students', *Education, Knowledge & Economy*, 2 (1): 27–37.

Min, W. (2005), *Economic Transition and Higher Education Reform in China*, PKU GSE Newsletter 089. Online at http://www.gse.pku.edu.cn/jianbao/200517.htm (in Chinese).

MoE (Ministry of Education) (2007), *China Educational Statistical Yearbook*, 2006, Beijing: People's Education Press (in Chinese).

Morgan, W. J. and Tuijnman, A. C. (Guest Editors) (2009), *European Journal of Education: Research, Development and Policy*, Special Issue, 'Chinese–European Cooperation in Education', 44 (1), March.

National People's Congress of the People's Republic of China (1998), *The Higher Education Law* (in Chinese).

National People's Congress of the People's Republic of China (2002), *Non-governmental Education Promotion Law of the PRC* (in Chinese).

Pan, S.Y. and Law, W.W. (2006), 'Legalizing education: the role of law in the regulation and deregulation of China's private education', *Education and the Law*, 18: 267–282.

State Council of China (1993), 'The Outline of Reform and Development in Chinese Education' (*Zhong Guo Jiao Yu Gai Ge He Fa Zhan Gang Yao*) (in Chinese).

6 The labour market for graduates in China

Fengliang Li, W. John Morgan and Xiaohao Ding

Introduction

Throughout the world educational systems, including those of higher education, are expanding. The fact that there are more job seekers with higher education qualifications will obviously have an impact on supply and demand in the labour market. This affects not only those with higher education qualifications, but also those without. When the increments in and the stock of the higher education population are small, job seekers who have received higher education can secure satisfying jobs more easily. However, with the expansion of higher education, when both increase over time, new higher education graduates may find it more difficult to obtain jobs with good terms and conditions, when compared with those who entered the labour market earlier. For example, they may be offered similar positions, but with lower starting salaries or on short-term contracts; or they will have to accept positions at a lower rank; or, most seriously, they will face unemployment after graduation (Fields, 1995). Such a situation carries with it knock-on effects for college and secondary school graduates.

However, consider, for example, the relationship between the expansion of the American higher education system and the graduate labour market after the Second World War. At that time, since higher education rapidly expanded in the United States, some people predicted that within 20 years, a large number of higher education graduates would face unemployment, as the number of positions in which graduates were interested would be far less than the number of job seekers with higher education qualifications. In practice, however, the growth in demand for higher education graduates in the USA between 1950 and 1970 continued to be greater than the growth in supply, a trend that has continued (Bishop, 1995). The question is whether China will have a similar experience.

Some contextual information is necessary. It is well known that over the last three decades China has been in huge systemic transition, achieving tremendous economic progress since the end of 1970. The country has other significant economic achievements, for example, effectively suppressing inflation, maintaining a stable currency and beginning the reform of private property rights. Since the 1990s, China has carried out the reform of state owned enterprises through the introduction of the stock system and the gradual formation of the

capital market in China, and industrial and agricultural productivity has continued to improve (Min, 2005).

With the development of the Chinese economy, the demand for highly educated workers has increased. Most importantly, the classic Chinese notion that education is a consumption good has been replaced by a strong belief that education is an investment, a source of future income. Furthermore, individual living standards have also continued to improve, together with expectations and aspirations. Individuals and families now want to invest in higher education as a means to secure both a higher income and status in society, and also, they can afford it. With the twin pressures of demand from both the labour market and from individuals and families, the Chinese higher education system has been compelled to expand. We can see, from Figure 6.1, that it has been doing so since the end of the 1970s, while since the end of the 1990s, the pace of expansion has apparently increased.

Researchers have found that in different periods in different countries, under different conditions, the interactions between the expansion of higher education and the labour market have followed different patterns. Consequently, they have proposed corresponding theoretical explanations and models (Fields, 1995). What may we say about the pattern of experience and development in China? How do the higher education system and the labour market interact? What kinds of higher education graduates are at an advantage in the labour market? And what impacts will the present demand situation and the likely future trends in the Chinese labour market have on the higher education system?

In the next section we consider a nationwide survey of higher education graduates seeking jobs in 2003. This was significant as it took place exactly four years after the massive expansion of higher education in 1999. The graduates surveyed were in the first cohort to enter the labour market following this expansion. Using the empirical findings of this survey, the chapter analyses the current Chinese job market for higher education graduates, from the perspectives of job seeking, starting salaries and the comparative advantage of different types of graduate. This will indicate what types of graduate potential employers prefer in the context of the expansion of higher education.

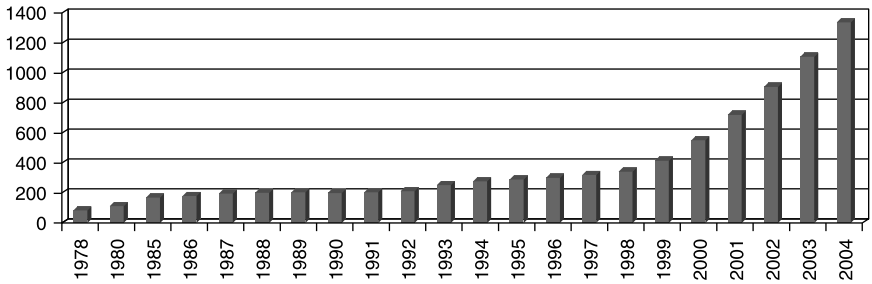

Figure 6.1 Number of students in regular institutions of higher education (10,000s).
Source: National Bureau of Statistics of China, 2004.

We consider next the expected trends in the labour market, focusing on the low employment rate and the high incidence of over-education. In the following section we suggest what changes should take place in the higher education system if it is to match the needs of and changes in labour market more accurately.

Finally, we offer a brief set of conclusions. The chapter draws upon an article published previously, which it does with permission (Li, Morgan and Ding, 2008).

Job seeking and starting salary

In 2003 a nation-wide survey of higher education graduates was undertaken by the Graduate School of Education (GSE), Peking University (PKU). The survey was geographically comprehensive covering East, Central and West China; Beijing, Guangdong, Guangxi, Hunan, Shandong, Shanxi, Yunnan, seven provinces or municipalities. The sample included (1) public or private higher education institutions; (2) post-graduate students, under-graduate students and college students; (3) different educational specializations. By July 2003, a total of 18,722 valid questionnaires had been collected and, of this total, 39.3 per cent were college students, 57 per cent were under-graduate students and 3.7 per cent were post-graduate students. What follows is a simple statistical description of their employment status and starting salary.

From Table 6.1, we can see that by the end of June 2003, 61.5 per cent of the full sample cases had confirmed their next career or study future prospects, while 31.9 per cent of full sample cases had signed their first job contract after graduation. However, 38.5 per cent of higher education graduates had still not confirmed their likely job situation after graduation, while 27.3 per cent had failed to find any job. Some graduates, 2.9 per cent, had been offered work, but were not

Table 6.1 Distributions of future prospects

Category	*Group division*	*%*	*Total*
Confirmed	Those who have signed job contract	31.9%	61.5%
	Those who are waiting to sign job contract	8.8%	
	Those who plan to be self-employed or start their own business	4%	
	Those who will continue their study	15.1%	
	Those who plan not to find jobs after graduation	1.7%	
Unconfirmed	Those who are waiting for employer's final confirmation	5.6%	38.5%
	Those who have tried but cannot find any job	27.3%	
	Those who have found some unsatisfactory job and will not accept it	2.9%	
	Others*	2.7%	

Note: *For example, many graduates want to try again next year if they couldn't study abroad this year.

satisfied and would therefore not accept it. The key point is that the number of those who had not yet confirmed their employment status for the near future was rather high. It means that approximately one-third of higher education graduates had to face unemployment soon after graduation (PKU GSE 2003).

Table 6.2 shows the rate of confirmed future and average starting monthly salary[1] of graduates by educational level, educational specialization and sex. For college graduates, the 'rate of confirmed future' was just 34.7 per cent, while the employment situation was far from optimistic. The rate for post-graduate students was 88.6 per cent; taking into account the deadline for the survey (the end of June),[2] which means that most postgraduate students found jobs successfully. What is more, the average starting monthly salary for postgraduates was 3,005 Yuan RMB; far exceeding the 1,501 Yuan RMB for undergraduates and the 1,300 Yuan RMB for college graduates (PKU GSE, 2003). When we consider the 'rate of confirmed future' by educational specialization, we find that for philosophy, economics, law, history, engineering, agriculture and management, the rates are over 60 per cent, with that for engineering being the highest at 73.2 per cent. The rates for education and for literature are the two lowest, at 28.2 per cent and 48.7 per cent respectively (PKU GSE, 2003).

A further element to consider is that of sex discrimination in the labour market. This has been a topic of widespread concern to society and to individual graduates in recent years. According to the simple statistical description from this survey, there is no apparent difference in starting salary between male and female graduates, being 1,547 Yuan RMB for males and 1,545 Yuan RMB for females.

Table 6.2 Rate of confirmed future, and monthly salary

Category	*Item*	*Rate of confirmed future*	*Salary (yuan/month)*
Level	College	34.7%	1,299.9
	Undergraduate	77.9%	1,501.2
	Post-graduate	88.6%	3,005.0
Specialization	Philosophy	72.9%	1,979.6
	Economics	65.6%	1,760.5
	Law	60.0%	1,640.5
	Education	28.2%	1,721.3
	History	72.4%	1,557.4
	Literature	48.7%	1,648.7
	Science	50.5%	1,367.1
	Engineering	73.2%	1,552.8
	Agriculture	71.9%	1,113.6
	Medicine	54.2%	1,135.9
	Management	61.8%	1,557.4
Sex	Male	65.9%	1,546.9
	Female	56.1%	1,545.2

However, the 'rate of confirmed future' for males is 65.9 per cent, slightly higher than the rate of females, which is 56.1 per cent.

Factor analysis of employment probability

Using the survey data, Yue *et al.* (2004) conducted a factor analysis on graduates' employment probability. The significant variables are given below:

- The level of education has a significantly positive impact[3] on successful job seeking. The higher the education level,[4] the greater the probability of success.
- The reputation of the higher education institution also has a significant and positive impact on employment. Graduates from key universities have greater employment probabilities than their counterparts from ordinary universities. The employment rate of public institutions is significantly higher than that of private institutions.
- There is a significant sex difference in getting job offers, with the male having an obvious and significant advantage. It means that, after some other variables are controlled, sex discrimination in employment is a probability.
- Both depth (such as the class rank of the qualification, National Standard English Certificate and holding office in student societies or in volunteer social work) and breadth (such as experience of part-time job, experience of a minor subject[5] or a second degree[6]) of knowledge grasped by graduates have significantly positive impacts on employment probabilities; depth has a greater impact than breadth.
- Those who can get information about potential employment from universities or colleges have greater employment probabilities.

The following factors do not seem to have a significant impact on job seeking:

- Graduates' personal search efforts, including search costs and search intensity, do not have significant effects.
- The effect of job seeking instruction provided by universities or colleges is not significant either.
- After controlling other factors above, family backgrounds, including residential origin, parents' education and occupation, are seen to have no significant impacts on employment probabilities.

Factor analysis of starting salary

Yue *et al*. (2004) and Li (2005) further estimated effects of related variables on starting salary, using the same data set. The following is a summary of their combined findings:

- As in employment probability, the educational level is again a significant and positive factor on salary. After other related variables are controlled,

educational specialization for example, starting monthly salary of undergraduates is 219–315 Yuan RMB higher than that of the college students, and post-graduate students get 1,400–1,700 Yuan RMB higher salaries than college students.
- The reputation of the institution still has a significant and positive impact on salary. Unsurprisingly, graduates from private institutions are at a disadvantage in starting salary, compared with their counterparts from public institutions. The latter get 565–703 Yuan RMB higher salaries.
- Depth of knowledge (such as the class rank of the qualification, National Standard English Certificate and holding office in student societies) has a significant effect; however the effect of breadth of knowledge (such as experience of part-time work, possession of minor subject or second degree) is insignificant.
- In general, after controlling other factors, educational specializations, including the status of the job match, have insignificant impacts on the starting salaries of most graduates.
- Unlike employment probability, there is no significant sex difference in starting salaries.
- Again, information about potential employment from universities or colleges helps graduates get jobs with significantly higher salaries, but it seems that job-seeking instruction provided by universities or colleges can do little to help graduates find better jobs.
- Although greater effort invested by individuals in job seeking does not necessarily lead to greater probability of employment, it has a significant and positive effect on starting salary. Except for paternal education, family backgrounds have insignificant effects.

What kind of graduate is at an advantage in the job market?

Based on the empirical findings about employment probability and starting salary above, we can attempt to answer this question for the current job market for higher education graduates:

- The higher the educational level, the greater the employment probability. The starting salary is also higher. We will discuss this point in more detail later.
- The reputation of the institution has a significant and positive impact both on employment probability and salary. For example, graduates from private institutions are at an apparent disadvantage both in terms of employment probability and in starting salary, compared with their counterparts from public institutions.
- Holding the National Standard English Certificate not only significantly improves probability of being a successful job seeker, but it also helps graduates to find a job with a significantly higher salary. This may due to the *certificate* effect (Berg, 1971), or the *signal* effect (Spence, 1973). The possession of an English language qualification may be an efficient proxy of greater

capacity or it may simply mean that, with globalization, potential employers prefer graduates with a proven ability in English (see also Li, Ding and Morgan, 2009).

- Potential employers tend to recruit students who had experience in student societies or in volunteer social work and also tend to provide such students with higher starting salaries. It may indicate that this sort of experience indicates to the employer the potential for various qualities and skills, such as punctuality, patience, dedication, a sense of responsibility, ambition, cooperation, and so on (Blaug, 1985, 1995).
- Those who can get information about potential employment from universities or colleges have apparent advantages both in employment probability and starting salary. The possible explanation is that there are information asymmetries between employers and graduates (Spence, 1973; Stigliz, 1975). The information and recommendation by universities or colleges can eliminate or diminish the problem of asymmetric information. Therefore, those who cannot get informational help are at a disadvantage and there is a need for an employment information structure.
- The effect of the job match on starting salaries is not significant. It may illustrate that employers do not care whether your field of job matches your field of study or not, but instead pay more attention to the true abilities accumulated during school study. Another explanation is that the employment elasticity of higher education in China has been rather high after a series of educational reforms since the early 1990s. Such reforms include a move from professional education to general education aimed at broadening the professional calibre.
- As for employment probability, there is sex discrimination since employers do tend to recruit more male graduates. However, the sex difference is not apparent in the starting salary. Potential employers provide starting salaries which are unrelated to sex, although female graduates have more difficulties in job seeking.

The comparison between university and college students

We mentioned above that both the employment probability and the starting salary of university graduates were significantly higher than those of college students, after related factors are controlled. Is this abnormal or normal? If there is just a simple level difference between college and university undergraduate education, it is reasonable that undergraduates have apparent advantages in the job market. Both human capital theory (Schultz, 1975; Becker, 1964) and screening hypothesis (Spence, 1973; Stiglitz, 1975) give their explanations respectively. However, in the Netherlands, for example, the differences between university education and higher vocational education are certainly not primarily caused by differences in level, but rather by differences in educational objective (Heijke and Koeslag, 1999). It has been argued that types of education might have a corresponding position in the labour market and that for higher education graduates can be differentiated as, first, the occupational domains of university education and,

secondly, the occupational domains of higher vocational education. Again, empirical evidence from the Netherlands further supported the argument that graduates of a given type of education have a comparative advantage in the corresponding occupational domain, compared with graduates of other types of education. Namely, students of higher vocational education have a comparative advantage in the occupational domain of higher vocational education; and students of university education have a comparative advantage in the same way.

Ding (2004) also investigated the comparative advantage of university undergraduates and of college students in China. We want to emphasize again that in China, according to official views, there are type and objective differences between college and university undergraduate education. Ding (2004) found that, first, both college and undergraduate students have a comparative advantage in the corresponding occupational domain; secondly, and compared with college students, undergraduate students have comparative advantages in their occupational domain; thirdly, such comparative advantages of college students are not apparent and are easily replaced by undergraduate students. Ding (2004) further quoted the objectives and academic standards of college and undergraduate education set out in the Higher Education Act promulgated in 1998. This emphasized that college education and university undergraduate education should be two different types of higher education systems. However, empirical evidence does not support the official definition of college education.

Therefore, Ding (2004) concluded that in China the major difference of undergraduate and college education is in the level rather than in the type; that college education is seen as just a 'compression-type' of undergraduate education. She concluded that how college education escapes the 'compression-type' model, and how college graduates become more competitive in the labour market, so as not to be easily squeezed out by university undergraduate students, are key questions for the healthy development of the general higher education system in China.

Trends in the labour market demand for graduates

According to the empirical findings of the survey data (PKU GSE, 2003) discussed above, the rate of graduates with an unconfirmed future was as high as 38.4 per cent, while 27.3 per cent of the sample had tried but failed to find any job by the end of June 2003. The question remains whether higher education graduates will find it increasingly difficult to find employment given the expansion of Chinese higher education. College graduates are already at an absolute disadvantage both in employment probability and starting salary. Is there a risk of over-education in labour market terms? If so, will this be aggravated by the continuing expansion of higher education? We know that answering each of these questions accurately is very complicated and requires sophisticated econometrics. We will not attempt this here, but will simply try to make a reasonable assessment based on some empirical results from other related research.

Will finding employment be more difficult for higher education graduates?

This is an important question that is as yet unresolved, as different studies have reached different conclusions. Some argue that rapid expansion increases the current supply of higher education graduates too quickly and outpaces the corresponding labour market demands. However, some studies point out that the proportion of workers in China with higher education is still rather low and needs to be raised if China is both to maintain economic development and to achieve a qualitative leap in standards. It is argued that it is other factors, structural and institutional ones for example, that lead to temporary difficulties in the current employment of higher education graduates.

Table 6.3 shows the official data on the employment rate of higher education graduates in recent years. From this we can see there is no apparent time series pattern in the employment rate. However, the data after 2002 are suspect since the Ministry of Education demanded that the employment rate should be higher than 70 per cent and the goal in any given year is decided the previous year. However, the authors believe that the data for 2000 and 2001 are more credible. In 2000, the employment rate for male graduates was 77.2 per cent and that for female graduates was 73.9 per cent. In 2001, there were more higher education graduates; however, the employment rates for both females and males increased significantly to 87.9 per cent and 86.4 per cent respectively. This shows that, with a small expansion, the employment rate increased rather than decreased. The authors believe that we still lack credible evidence to support the argument that the employment situation of graduates will worsen with the expansion of higher education. It is important to be careful about drawing the conclusion that it is a serious problem for higher education graduates to get jobs since, historically, many scholars or government policy makers have been mistaken when they tried to predict the balance between supply and demand for workers with higher education qualifications. A well-known example is that of 1980, when the US Bureau of Labor Statistics predicted that there would be a large surplus of university graduates in the 1980s; but what followed was a shortage of university graduates, and significantly increased salaries of higher education workers (Bishop and Carter, 1991).

Table 6.3 Employment rate in recent years

Year	*Employment rate*	
2000	77.2% (Male)	73.9% (Female)
2001	87.9% (Male)	86.4% (Female)
2002	About 70%	
2003	About 73%	
2004	About 73%	
2005	72.6%	

As for the salaries of higher education graduates in China, the authors still remain optimistic that the rates of return (ROR) to higher education will not decline, but will actually continue to rise in the near future. Many studies of developed countries show that the expansion of higher education did not necessarily result in a significant fluctuation of salaries for graduates of higher education. In the majority of European countries, salary differences between those who had not received higher education and those who had received higher education declined in the 1960s and 1970s; but they stabilized or increased in the 1980s (Bishop, 1995). Psacharopoulos and Patrinos (2002) found that during the period 1990–2002, the international average standard of Mincer's Rate of Return (MROR)[7] declined by only 0.6 per centage points, while during the same period, the international average scale of education had also been expanded. Psacharopoulos and Patrinos (2002) argued that, if other conditions remained unchanged, the increase in supply of education only led to a slight decrease of ROR to education.

The evidence above suggests that the expansion of higher education does not necessarily lead to a decline in ROR to higher education, and empirical evidence in China supports this. Since the early 1990s, although there has been a sustained growth of the higher education system, the ROR to higher education has also undergone a sustained increase, from 4 per cent in 1991 to 19 per cent in 2004 (Chen *et al.*, 2003; PKU GSE, 2005). The current ROR to higher education in China has reached even more than the international average, and it can be said that Chinese higher education has entered a stage of high marginal returns (Chen *et al.*, 2003). This data is shown in Table 6.4. Moreover, according to the international comparison, Yue (2004) found that the percentages of highly educated workers in different Chinese regions are all lower than the corresponding international averages, some economic factors controlled; and the difference is especially greater in coastal areas than in inland areas. This means that the potential demand for higher education graduates is still large in every Chinese region, while the coastal areas have a significant capacity to absorb highly educated workers.

Will over-education become more serious?

Given the rapid expansion in the global numbers of highly educated workers since the late 1970s, the question of over-education in labour market terms has became a hot topic among policy makers and academics, as well as the general public. A further issue is the difficulty of measuring the incidence of over-education;

Table 6.4 ROR to higher education since 1991

Year	*University*	*College*
1991	3.78%	
1995	7.23%	5.33%
2000	13.1%	9.97%
2004	18.9%	14.5%

although it has been concluded from empirical studies that, in a number of countries, the incidence of over-education is an increasing function in the time series. In the case of China, using the data from the 2003 survey, Yang and Yue (2005) found that the incidence of over-education for overall higher education graduates is about 20 per cent[8] and, as might be expected, that the incidence increases dramatically with the educational level. According to an earlier survey in 1998, the overall incidence of the over-education of graduates was 16.1 per cent (Wen, 1999). This suggests that more higher education graduates considered themselves over-educated in 2003 than in 1998. Another empirical study (Wu, 2004) found that the incidence of over-education has an apparent upward trend as time passed. There were two data sources used in this study. One is a survey of nationwide urban households in 1995 by National Bureau of Statistics of China (NBS) and the other survey data concern employees' education and careers in three Chinese enterprises in 2003.

However, another study found that even in the 1980s, the phenomenon of over-education was very serious and in some large and joint venture enterprise, the incidence of over-education was 26.7 per cent (Wei, 1988). However, it was argued further by Wen (1999) that the Chinese incidence of over-education in 1998 was not only lower than that of Europe, the USA and other developed countries in the 1990s, but also was apparently lower than in China in the 1980s. According to the relationship between higher education and the labour market, the incidence of over-education is not simply a function increasing in the time series. Therefore, as with employment, over-education is not decided only by the scale of higher education. Human capital theory suggests that over-education is rather a temporary disequilibrium phenomenon (Tsang and Levin, 1985). The more competitive the labour market, the shorter the adjustment period, and the smaller the incidence of over-education. This can explain why the incidence of over-education fell in the 1980s and 1990s, a period which saw a rapid expansion of higher education in China. Moreover, Wu (2004) found that in recent years, although the incidence of over-education increased, the incidence is related negatively to the competitiveness of sector or industry in China. It also shows that the problem of over-education may be alleviated with continuing Chinese economic market reform.

Based on the above evidence, the authors are optimistic about over-education, as we are optimistic about the employment of higher education graduates. The reason is not only that we have confidence in Chinese labour market reform and transition, but also that we should be cautious about the concept of over-education itself. Comparative experience shows that a decline in quality accompanies the expansion of higher education. For example, Bishop (1995) pointed out that over-education may be suggested simply because of the low quality of university graduates. He provided data to support this hypothesis in the United States. He stated that 17 per cent of young university graduates had a lower reading ability even than average high school students. Is it a case of under-education or over-education, if a university graduate, with reading ability no greater than that of a high school student, takes a job as a secretary? Following this logic, enhancing the

quality of higher education may be able to reduce the incidence of over-education. Then, through educational reform, both university undergraduate education and college education may be able to use their respective comparative advantages more effectively and university graduates would not necessarily squeeze out their college counterparts in the labour market. It would also reduce the incidence of over-education. Furthermore, the incidence of over-education is negatively related to the degree of competitiveness in the sector or industry. In this case the problem of over-education may be alleviated with the development of the economic market. Improvements in the quality and diversity of higher education are essential, together with the continued reform of the Chinese labour market. If these can be managed, then we predict that the over-education phenomenon of recent years will prove to be only temporary.

Change in higher education in response to the labour market

The relationship between the higher education system and the labour market in China is becoming ever closer, while the autonomy of universities and colleges is growing also. This process will be accompanied by adjustments as supply and demand attempt to come into equilibrium. Based on the analysis given in this chapter, we suggest the following changes or reforms in the Chinese higher education system.

First, more attention needs to be paid to the *quality* of higher education. In the current job market graduates from institutions with a good reputation not only have greater probabilities of being successful job seekers, but can also get job offers with higher starting salaries: those who have a strong academic record, supplemented by holding a National Standard English Certificate, for example, are at an advantage both in job seeking and in starting salary. These criteria will be noted by higher education students and institutions, while the responses from the job market will stimulate students, institutions and even governments to improve the quality of higher education. Meanwhile, to a large extent, improving the quality of education is also useful in reducing over-education; therefore, it will drive governments to push institutes to improve the quality of higher education.

Secondly, *liberal* or general education, the credit system, and the system of minor or second degrees should continue to be popular with both students and employers. We have shown that the effect of the job match on starting salary is insignificant, while the depth of knowledge accumulated during higher education study has a significant and positive impact on probability of employment. This evidence supports the success of higher education reform focusing on general education since the 1990s (Wen, 1999). In fact, since the mid 1980s, the Chinese higher education system has reduced the number of specialisms from over 1,400 to about 200 through combining the over-specialized and narrow specialisms (Min, 2005). Meanwhile, the higher education system will continue to improve the credit system, the major/minor options and the first degree/second degree system. This will provide more study options for higher education students so that students can take the initiative to acquire vocational skills in their expected

occupations, according to their own characteristics and preferences, but need not be restricted by their initial academic major.

Thirdly, the *diversity* of higher education provision needs to be enhanced. At present, from the perspective of employment, the most underprivileged groups are graduates from colleges and from private higher education. College graduates have no apparent comparative advantages in their corresponding occupational domain and are easily squeezed out or replaced by university undergraduate students; this also results in the over-education phenomenon. If the Chinese higher education system is to grow steadily and healthily, playing its essential part in national development, this issue must be resolved. The current policy of the Ministry of Education is to stimulate college education and also to encourage its relationship with the labour market. It may be expected also that college education will continue to be distinguished from university undergraduate education in type, but less and less in level. This would be a significant contribution to the pluralism and diversity of the whole Chinese higher education system. Again, comparative experience from the United States and from the United Kingdom may be instructive to policy (Morgan, 2000).

Fourthly, *information* channels about potential employment need to be developed step by step. Currently, graduates who can get adequate employment information from their universities or colleges have significant advantages both in employment probability and starting salary. This may mean that the employment information through universities or colleges is helpful in diminishing information asymmetries between graduates and employers, as well as improving the self-selection of graduates and optimal assignment of labour market. In this way, graduates, institutes and employers, would all have strong motivations to construct more transparent and effective channels of employment information.

Fifthly, external and independent *evaluation* of the quality and the reputation of universities and other institutions should be developed, as higher education expands to meet the brisk demands of the whole of society. The rise of mass higher education in China will weaken the signal of the higher education diploma as it has done elsewhere. However, the labour market still needs the informative function of education because the labour market itself cannot play the role of sorting and assigning as effectively as the educational system (Groot and Hartog, 1995). We argue that in China, as elsewhere, the quality and reputation of institutions will replace educational level as signal and screening mechanisms. Therefore, it may not be surprising that, like Western developed countries, a series of intermediary agencies which evaluate independently the performance of higher education institutions, their specializations and the standard of academic journals, will emerge in China to provide information on higher education quality and reputation to individuals and to society in general.

Conclusion

The rapid expansion of higher education in China has been accompanied by the problems discussed in this chapter. Nevertheless, based on empirical results from

related research and through descriptive and logical reasoning, we are optimistic for the future and argue that the problems are essentially temporary. Moreover, the empirical evidence shows a steady increase of ROR to higher education and a lower percentage of highly educated workers in China compared with the corresponding international average, which is encouraging for further development. If the Ministry of Education monitors the rate of expansion of higher education, as well as encouraging structural educational reform and the relationship with the labour market, it is reasonable to be optimistic about the future of Chinese higher education and the contribution of its graduates to Chinese economy and society.

Notes

1 The expected wage reported subjectively by the graduates.
2 Many graduates find a satisfactory job within the period July–September of the year of graduation.
3 In this chapter 'impact' or 'effect' are *not* claimed as econometric terms as we do not test them using sophisticated econometrics.
4 Although there is difference of level between undergraduate education and college education, in the official view the more important differences between undergraduate education and college education are differences of type and objective, since college is the abbreviation of higher vocational and college education. In any case, the difference between undergraduate and postgraduate is definitely that of a difference in level.
5 Most universities or colleges provide minor subject programmes for their students. Any students have the freedom to choose such programmes, which are different subjects from their majors and which are usually hot subjects, such as computer studies, finance and so on.
6 A second degree is similar to a minor subject. The fundamental difference is that one can get a degree certificate if a second degree is chosen and examinations for all courses are passed.
7 In this chapter, if it is not specially emphasized, the ROR means Mincer's ROR.
8 The method is self-assessment. In this chapter, if it is not specially emphasized, the method of defining incidence is that of self-assessment.

References

Becker, G. (1964), *Human Capital: A Theoretical and Empirical Analysis: With special reference to education*, New York: Columbia University Press.

Berg, I. (1971), *Education and Jobs: The great training robbery*, Boston: Beacon Press.

Bishop, J. and Carter, S. (1991), 'The worsening shortage of college graduate workers', *Educational Evaluation and Policy Analysis*, 13: 221–255.

Bishop, J. (1995), 'Over-education', in M. Carnoy (ed.), *International Encyclopedia of Economics of Education*, 2nd edition, Oxford: Pergamon Press and Elsevier Science.

Blaug, M. (1985), 'Where are we now in economics of education?' *Economics of Education Review*, 4: 17–28.

Blaug, M. (1995), 'The wage contract and education', in M. Carnoy (ed.) *International Encyclopedia of Economics of Education*, 2nd edition, Oxford: Pergamon Press and Elsevier Science.

Chen, X., Chen, L. and Xia, C. (2003), 'Rates of return to schooling in urban China: Changes in the 1990s', *Peking University Education Review*, 2: 65–72 (in Chinese).

Ding, X. (2004), 'A comparison of the labor market position of graduates from colleges and universities in China', *Peking University Education Review*, 2: 43–9 (in Chinese).

Fields, G. (1995), 'Educational expansion and labor markets', in M. Carnoy (ed.) *International Encyclopaedia of Economics of Education*, 2nd edition, Oxford: Pergamon Press and Elsevier Science.

Groot, W. and Hartog, J. (1995), 'Screening models and education', in M. Carnoy (ed.) *International Encyclopaedia of Economics of Education*, 2nd edition, Oxford: Pergamon Press and Elsevier Science.

Heijke, H. and Koeslag, M. (1999), 'The labor market position of university education and higher vocational education in economics and business administration: A comparison', *Education Economics*, 7: 259–276.

Li, F. (2005), 'Further tests of screening on education: Evidence from the labor market in China', unpublished PhD thesis, Peking University (in Chinese).

Li, F., Ding, X. and Morgan, W. J. (2009), 'Higher education and the starting wages of graduates in China', *International Journal of Educational Development*, 29, 4: 374–381.

Li, F., Morgan, W.J. and Ding, X. (2008), 'The expansion of higher education, employment and over-education in China', *International Journal of Educational Development*, 28: 4, 687–697.

Min, W. (2005), *Economic Transition and Higher Education Reform in China*, PKU GSE Newsletter 089. Online at http://www.gse.pku.edu.cn/jianbao/200517.htm (in Chinese).

Morgan, W. J. (2000), 'Community colleges in the United States: A model for Britain?' *International Journal of Lifelong Education*, 19: 225–235.

National Bureau of Statistics of China (2004), *China Statistical Yearbook*, Beijing: China Statistics Press.

PKU GSE (2003), 'Employment status survey of higher education graduates in 2003', PKU GSE Newsletter 026. Online at http://www.gse.pku.edu.cn/jianbao/200326.htm (in Chinese).

PKU GSE (2005), 'Education and employment survey of Chinese urban residents in 2004 (a)', PKU GSE Newsletter 092. Online at http://www.gse.pku.edu.cn/jianbao/200522.htm (in Chinese).

Psacharopoulos, G. and Patrinos, H. (2002), 'Returns to Investment in Education: A further update', *World Bank Policy Research Working Paper* No. 2881.

Schultz, T. (1975), 'The value of the ability to deal with disequilibria', *Journal of Economic Literature*, 13: 827–46.

Spence, M. (1973), 'Job market signaling', *Quarterly of Journal of Economics*, 87: 355–374.

Stiglitz, J. (1975), 'The theory of "screening", education, and the distribution of income', *American Economic Review*, 65: 283–300.

Tsang, M. and Levin, H. (1985), 'The economics of over-education.', *Economics of Education Review*, 4: 93–104.

Wei, X. (1988), 'A Quantitative Study on the Effect of Education on Input and Production of Joint Venture Enterprise in China', unpublished M.Phil. thesis, Peking University (in Chinese).

Wen, D. (1999), 'A study of the status quo of Chinese graduate allocation', unpublished Ph.D thesis, Peking University (in Chinese).

Wu, X. (2004), 'A study of Chinese over-education', unpublished Ph.D thesis, Beijing Normal University (in Chinese).

Yang, J. and Yue, C. (2005), 'Over-education or under-education: some evidence from Chinese graduates', Chinese Economics Association 2005 conference paper. Online at http://www.cenet.org.cn/cn/CEAC/2005in/jyfl003.doc.

Yue, C. (2004), 'The percentage of population with higher education: An international comparison', *Comparative Education Review*, 25: 11–15 (in Chinese).

Yue, C. et al. (2004), 'An empirical study of the employment competition of graduates', Management World, 11: 55–63 (in Chinese).

7 The occupational orientation of doctoral graduates in China

Yandong Zhao and Dasheng Deng

Introduction

Doctoral graduates are the top-level products of the higher education system in any country. It may be said that generally they have acquired significant ability in independent scientific research and the capacity for systematic and creative thinking. Consequently they play an extremely important role in national innovation systems. The appropriate employment of such graduates reflects not only the efficiency of a country's higher education provision and its labour market system, but also the nation's ability in utilizing scientific and technological human capital. Therefore, a study of the employment of doctoral graduates is of great theoretical and practical importance. The short note contained in this chapter focuses on one important aspect of Chinese PhD graduates' employment, i.e., their occupational orientation.

The term *occupational orientation* means the attitude and propensity of individuals and groups of individuals toward certain kinds of occupation (Palmer, 1941; Stephenson, 1958). The United States and other developed countries have always attached importance to research into the occupational orientation of doctoral graduates. For example, the US National Science Foundation has conducted an annual *Survey of Earned Doctorates* (SED) on PhD graduates since 1958, which investigates their educational achievement and occupational orientation. Since 1973, another survey based on random sampling, namely the *Survey of Doctorate Recipients* (SDR), has been conducted every two years. This survey focused on PhD graduates' occupational mobility and living conditions, as well as their evaluation of the doctoral education obtained (NSF 2006). Some European countries, though they have no such systematic and lasting research programmes as in the United States, have done some related small-scale surveys and research. Such surveys and studies have built up a solid foundation for relevant policy making (Martinelli, 1999; Shinichi, 1999; Haynes *et al*., 2009). However, China lacks adequate studies of this subject, and those that have been made are far from satisfactory for related policy making, being limited in the size of the samples, in their research framework and theoretically.

However, in 2007, the Chinese Academy for Science and Technology for Development conducted its own *Survey of Doctorate Graduates' Occupational*

Orientation in China. Funded by the Chinese Association of Science and Technology and the Institute of Science, Technology and Society, this is the first large-scale comprehensive study of the occupational orientation of doctoral graduates in China. In this study, the research team used a multi-stage random cluster sampling method to sample 3,000 doctoral graduates from 14 universities and research institutions in four cities (Beijing, Shanghai, Wuhan and Lanzhou). The sampled graduates were asked to complete a self-reported questionnaire. The survey was conducted in May and July 2007. A total number of 1,903 questionnaires were successfully collected, with a response rate of 63.4 per cent.

Based on the data from this survey, in this short note we have analysed the occupational orientation of doctoral graduates in China from two different perspectives. First, we inspect the actual content of the doctoral occupational orientation, that is, the exact expectation factors of the graduates themselves, including their expected working regions, working types, working contents, working unit/centre types, and income. Secondly, we inspect the dimensional structures of their occupational orientation, which is the graduates' evaluation of the various dimensions of occupations, as well as their internal structure. The survey showed that the following four main elements should be noted.

Doctoral graduates' occupational orientations showed a strong tendency of regional aggregation

The survey revealed that 83.2 per cent of the doctoral graduates surveyed prefer to work in the eastern region, while 46.7 per cent selected Beijing and 18.5 per cent selected Shanghai as their ideal place to work. This showed that the Chinese doctoral graduates' occupational orientation has a distinctive regional aggregation: their primary choice is the eastern region. The middle and western regions are lacking in attraction for them. Furthermore, the analysis indicated that the graduates from the eastern universities were unwilling to take employment in middle and western regions, but the opposite is overwhelmingly true for doctoral graduates from these regions. For example, 53 per cent and 70 per cent of the doctoral graduates from Wuhan University (in the middle region) and Lanzhou University (in the western region) preferred respectively to work in the eastern region. This suggests that it is rather difficult for the middle and western regions to keep their own doctoral graduate talents and it would be even more challenging for these regions to attract such graduates from the eastern region.

When we consider the urban/rural divide of the occupational orientation, the trend becomes more obvious. An overwhelming majority (about 94.9 per cent) of the doctoral graduates want to be employed in urban areas. Furthermore, those who prefer employment in municipal cities and provincial capital cities such as Beijing or Shanghai account for 86.5 per cent. Less than 5 per cent are willing to take an employment opportunity in rural areas (see also Chapter 1).

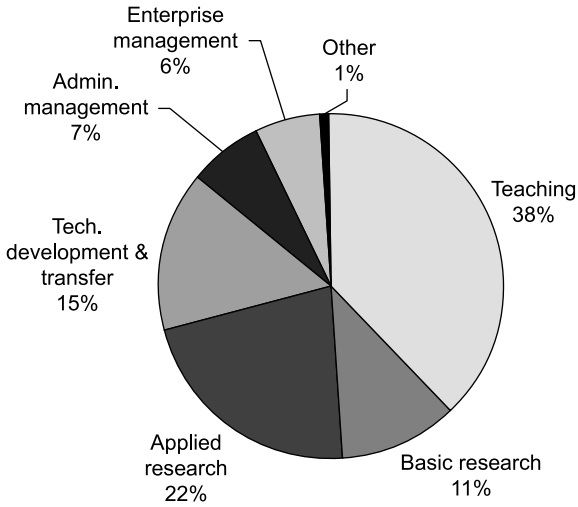

Figure 7.1 PhD graduates' preferred occupational job types.

Teaching and research are the primary choices of doctoral graduates; research and development work is becoming more attractive

The study found that teaching was the doctoral graduates' first occupational choice: 38 per cent chose 'teaching'. The graduates seem also to show a preference for applied research and for technology research and development (R&D) related professions, which accounted for 22 per cent and 15 per cent respectively. Those who opted for basic research accounted for 11 per cent. In China, teaching was considered as 'more stable' than work in research, and 'had less pressure'. That one reason explains why so many graduates tended to choose the teaching profession. As shown later in this section, the married graduates were more likely to choose the teaching profession, a finding that provided further evidence for this judgment, as the married are usually more concerned about stability and quality of life. Meanwhile, the rapid growth of higher education in China in recent years has greatly increased the demand for university teachers in the labour market. This might also have had an impact on PhD students' occupational orientation.

Further analysis revealed that the chosen occupational categories related to a great extent to the doctoral graduates fields of study. Thus, comparatively, the humanities and social science graduates tended to choose the teaching professions primarily (about 57 per cent); science graduates primarily chose the basic research fields (about 20 per cent); those who graduated from the engineering fields accounted for the highest portion in applied research and technology development and transformation (57 per cent). It was also found that doctoral graduates' social background had prominent impacts on their occupational choice. Those who were

Table 7.1 PhD graduates' expected wage and reservation wage, by field of study and city

Category	*Item*	*Expected RMB*	*Reservation wage RMB*
Field	Science	5,996	3,772
	Engineering	7,254	4,706
	Liberal Arts	5,275	3,404
Location	Beijing	6,207	4,006
	Shanghai	7,401	5,028
	Wuhan	6,178	3,772
	Lanzhou	5,462	3,411

married were more interested in teaching professions. Those who had an advanced academic interest were more likely to choose basic research and/or the teaching profession, rather than choose research and development-related professions. Those who had a greater confidence in their own academic capacity were also more likely to choose basic research professions.

Corresponding to the occupational contents, the graduates' primary choice of working units (*danwei*) were universities and research and development (R&D) institutions. Almost one half (47 per cent) chose to work in a university, and 16 per cent chose research and development institutions.

The doctoral graduates' expected monthly wage and mean reservation wage was 6,300 RMB and 4,026 RMB respectively

In the survey we asked the doctoral graduates to indicate their 'expected wage' and their 'reservation wage'. The former refers to an appropriate average monthly income that the graduates expected according to their own estimated abilities and qualifications and the labour market supply–demand relationship. The latter refers to such graduates' acceptable minimum income, i.e. the threshold at which they choose not to 'reserve' or withhold their labour. The result showed that the average expected monthly wage was about 6,300 RMB and that the reservation wage (minimum for acceptance) was 4,026 RMB in average.

The engineering graduates indicated the highest incomes in both the expected and the reservation wages; science graduates came next; and the humanities and social science graduates were the lowest. In accordance with the graduates' school location, those from Shanghai and Beijing expected a higher income than those from Wuhan and Lanzhou. The correlations between the doctoral graduates' expected wage, their subject major and their locations are probably a result of labour market segmentation. In other words, the subject majors and the locations of the graduate school have already placed doctoral graduates in different labour markets; the difference in expected wage level only reflects such segmentation in the labour market (See also Li *et al.*, 2009).

Table 7.2 Graduates' appraisal on occupational orientation by dimension

	Indicators					*Mean*
	Unimportant	*Somewhat unimportant*	*Indifferent*	*Somewhat important*	*Very important*	
Future opportunity for (personal) development	0.0	0.7	7.6	39.0	52.7	4.44
Salary and welfare	0.3	0.7	8.9	48.7	41.4	4.30
Future of industry	0.3	1.4	10.4	47.2	40.6	4.26
Fit one's interest	0.2	1.5	14.0	45.1	39.2	4.22
Obtaining one's aspiration	0.1	2.1	15.7	49.7	32.5	4.12
Geographical location	0.9	2.8	17.7	46.3	32.3	4.06
Stability	0.3	2.4	18.9	48.8	29.5	4.05
Facilities	0.2	1.4	19.9	52.5	26.0	4.03
Degree of freedom	0.1	3.2	23.0	48.4	25.3	3.96
Ownership of the working unit	1.3	5.4	23.3	42.7	27.3	3.89
Matching to the field of study	1.3	5.7	22.1	45.3	25.5	3.88
Family consideration	1.9	5.8	22.3	42.5	27.4	3.88
Internal personal relationships	0.5	3.7	27.4	47.2	21.2	3.85
Contribution to the society	1.6	3.7	24.8	48.6	21.3	3.84
Job challenge	0.3	3.5	30.3	48.0	17.9	3.80

The majority of doctoral graduates have high occupational expectations for their future career

An individual's anticipated goal or career path is a part of the occupational orientation and here we call this 'occupational expectation'. The survey showed that the vast majority of the doctoral graduates had rather high occupational expectations: those who indicated that 'doing one's own work well is enough', which is the lowest occupational aim, accounted only for 19.7 per cent and roughly 33 per cent of graduates indicated that they wanted to be 'the key member in their work'. 37.8 per cent of graduates aimed to be 'influential in one field'. 8.9 per cent of the doctoral graduates surveyed expressed even greater ambition, wanting to be the

'leading figure in one field'. The ambitions reflected in the doctoral graduates' occupational expectations implied a bright future for Chinese scientific research development.

Occupational expectations varied with the doctoral graduates' occupational orientation. Those who preferred to go to eastern regions had higher occupational expectations, while only 16 per cent of those who chose to stay in the eastern area indicated that 'doing one's own work well is enough' is an acceptable aim, This may be compared with 40 per cent of those who chose to be employed in the western regions, who indicated that such an aim was acceptable.

When considering the wage comparisons, there was a positive correlation between the expected wage and the occupational expectation aim: those who expect higher income also aim relatively high in occupational expectations.

The occupational orientation structure

When we examine the specific contents of the occupational orientation, we find that it consists of a group of specific details of a job, such as working place, working tasks, actual wage and so on. However, when we consider the structure of the occupational orientation, it can be read as the dimensions and standard of choosing a job. We have presented an account of the content of the doctoral graduates' occupational orientation and now analyse its occupational dimension structure.

The factors to be considered when choosing a profession

The study divided the dimensions of the graduates' occupational orientation into two categories, namely 'the material orientation' and 'the value orientation'. The material orientation includes the wealth, prestige and authority orientation; the value orientation accounts for life and social interaction orientation. Furthermore, we can break the second level of indicators down to a more specific level; for example, wealth orientation may take account of both the income and welfare indicators. Using a similar concept, we came up with 15 dimensional indicators (see Table 7.2) with which to build the doctoral graduates' occupational orientation dimension structure. The respondents were then asked to assign number scores in accordance with the importance of these dimensions to them.

The mean score of all 15 items was greater than 3, which meant that all 15 dimensions were considered important and there is only difference in the *degree* of importance. The item 'Future opportunity for development' showed the highest score (4.44), which indicated that the graduates saw this as an essential factor. Scored in places 2–4 were 'salary and welfare', 'future of industry' and 'fits one's interest'. The mean scores here were 4.30, 4.26 and 4.22 respectively. The lowest three mean scores were 3.80, 3.84 and 3.85 for 'job challenge', 'society contribution' and 'internal personal relationship' respectively.

In the survey, we also asked the respondents to select the most important three items from the 15. The results were very close to the average scores shown in Table 7.2. Some 60 per cent of participants indicated that 'the salary and welfare'

Table 7.3 Factor analysis of PhD graduates' occupational orientation

	Factor: rotated				
	1	*2*	*3*	*4*	*5*
Obtaining one's aspiration	0.803				
Future opportunity for (personal) development	0.786				
Future of industry	0.748				
Contribution to society	0.683			0.209	
Salary and welfare		0.881			
Facilities		0.830			
Ownership of the working unit			0.822		
Geographical location			0.814		
Degree of freedom				0.831	
Matching to the field of study	0.239			0.669	
Family consideration					0.962

was the most important factor to consider when looking for a job. The next was 'Future opportunity for development', with more than 40 per cent choice. In the third place was 'fit one's interest', with about 30 per cent indicated. The items with over 20 per cent choice included 'family consideration' and 'job stability'.

In sum, when Chinese doctoral graduates choose a profession, they regard the future opportunity for development, the salary and personal interest in the job as the three most important factors for the decisions.

Five basic dimensions of occupational orientation

To better understand the doctoral graduate occupational orientation dimension structure, we have used the statistical method of factor analysis to simplify the above 15 dimensions into five representative occupational orientation categories. These are: namely: 'ideal orientation', 'reward orientation', 'working unit/centre orientation', 'freedom orientation', and 'family orientation.'

Specifically, 'ideal orientation' reflected whether the participants thought highly of 'obtaining one's aspiration', 'future opportunity for development', 'future of the industry', and 'contributions to society'. This showed that the participants valued the realization of their ideal and values when choosing a profession. The 'reward orientation' reflected the importance of the 'salary and welfare' and of 'facilities' to the participants. Obviously, in this case they valued the job's material repayment conditions more. The 'working unit/centre orientation' showed to what degree the participants valued 'ownership of working unit/centre' and 'location', which reflected their concern about the job locations. The 'freedom orientation' showed how much the participants valued 'degree of freedom' and to what extent the job 'matched their field of study'. It reflected the doctoral graduates' preference for control of the job. Finally, the 'family orientation' reflected whether the participant valued 'family considerations (e.g. parents, spouse's living location, children's school location and so on.)'.

These five dimensions go with the 'material orientation' and 'value orientation' we mentioned at the very beginning. In particular, the 'ideal orientation' and the 'freedom orientation' may be grouped into the 'value orientation', the 'reward orientation' and the 'working unit/centre orientation' may be grouped in a kind of 'material orientation', and the 'family orientation' tends to reflect one's personal needs, and could be grouped either in the 'value orientation' or as a new category of 'personal emotional orientation'. In the following analysis, we take the 'factor score' from the five dimensions as the measure for the individual's occupational orientation dimension structure.

The relation between occupational orientation dimension structure and its contents

A further analysis of the relationship between the doctoral graduates' occupational orientation dimension structures and its contents, we found the following interesting results: First, those that chose to be employed in the western regions scored far lower in the 'ideal orientation' than those who chose the eastern regions, but they scored higher in the dimensions such as the reward orientation, working unit/centre orientation, job flexibility orientation and the family orientation. This indicates that those graduates' choosing the western regions were considering the realistic aspects of the job such as facility, type of working unit/centre and family factors rather than the fulfilment of their ideals. Other results of this survey showed that the middle and western regions have provided more favourable working conditions for graduates than the eastern regions; and those who chose to be employed in the middle and western regions expressed greater satisfaction with the job facility conditions. In China people used to believe that the reason why the western region is less attractive to the doctoral graduates was poor material conditions. However, our findings show that now the western region has made great progress in terms of providing material conditions (or so-called 'hardware' conditions) for the talents. Nevertheless, it is still considered inferior in terms of 'soft' conditions, such as institutional environment, level of marketization and so on, which might deter the doctoral graduates from choosing the western region as their destination.

Secondly, those who chose teaching jobs had obviously lower average scores in both 'ideal orientation' and 'reward orientation', but they scored higher in terms of 'freedom orientation'. Those who chose basic research-related jobs scored the highest in 'job flexibility orientation'. Those who chose technology development and transformation work scored the highest in 'reward orientation'. And those who chose administration and enterprise operation and management scored especially high in working unit/centre orientation; however, they scored rather lower in 'freedom orientation'. From this we can conclude that those who chose teaching and basic research jobs value job attributes such as 'matching one's study field', 'degree of freedom' and, at the same time, they emphasize fulfilling themselves. Those who chose applied technology and research and development jobs pay more attention to the salary rewards. And those who chose management-related

jobs care more about the nature of the working unit/centre. Such findings, we argue, are quite reasonable. Finally, those that have higher reward orientation and ideal orientation also expected higher income, but those with a higher freedom orientation have a low expected income. On the other hand, the graduates with higher occupational expectation are also more likely to score higher on ideal orientation.

Conclusion

What are the policy implications of the research? These may be summarized as follows.

First, currently the occupational orientation of Chinese doctoral graduates and their actual employment show an aggregating characteristic. The majority prefers to be employed in the eastern region, and most of the doctoral graduates surveyed were actually employed there. Such a phenomenon has both historical and understandable roots, which are not likely to be changed in a short time. There is enough evidence showing that the middle and western regions' unattractiveness to talent is not because of the poor material remuneration or lack of reward. The problem lies rather in the middle and western regions' perceived inability to provide the graduates with an environment in which they can fulfil their ideals or aspirations. Therefore, to achieve fair talent allocation in different regions of the nation, the central government and local governments should not only provide favourable material rewards[1] to those who are willing to be employed in the middle and western regions, but also strengthen the local institutional, cultural and recreational infrastructure and provide an ideal 'soft' environment attractive to highly educated graduates and their families.

Secondly, the majority of the doctoral graduates chose to work in higher education and research institutions and to work in scientific and research-related jobs. Those who made such decisions were more likely to be concerned about the matching between their field of study and the job, about the degree of freedom that the job could give, and to emphasize their personal ideals and aspirations. Such tendencies were also shown in the actual employment of these doctoral graduates. This shows that the occupational orientation and actual choice-making behaviour of such doctoral graduates basically conforms to the objective of the nation's advanced research educational system.

Thirdly, most of the doctoral graduates regarded 'matching the field of study' as an important indicator when choosing their occupation. In terms of their actual employment, about 90 per cent of those surveyed indicated that their jobs suited their fields of study fairly well or relatively well. This showed that currently Chinese doctoral students are solving the problem of integrating learning with employment and doing quite well. However, further studies are needed to explore how to improve the doctoral education and training system in universities and research institutes can make a better match between doctoral graduates' learning and their skills and capacity expectations of their subsequent employment. This is

especially important for those who have a clear orientation towards employment in the commercial sector of the labour market.

This chapter has provided a short account of the occupational orientation of doctoral graduates in China. There are many interesting questions raised that need further study. For example, with the rapid increase in the number of doctoral graduates, the labour market demand for them in big coastal cities has shown a tendency of "saturation". Will this bring about a change in the occupational orientation of such graduates in the future? For another example, in recent years, more and more overseas doctoral graduates are coming back to China (see Chapter 10). Will this also have an impact on the labour market and thus have an impact on the occupational orientation of the local graduates? Further study on these topics might help us to better understand the occupational orientation of Chinese doctoral graduates and thus help us to better understand the great social transition that is taking place in contemporary China.

Note

1 Now the local government is not only providing favourable material conditions, such as high wage and good research infrastructure to the talents, but is also providing favourable policies to their families. These favourable policies include providing jobs for their spouses and educational opportunities for their children.

References

Haynes, K., Metcalfe, J. and Videler, T. (2009), *What Do Researchers Do? First destinations of doctoral graduates by subject*, Careers Research and Advisory Centre (CRAC) Limited.

Li, F., Ding, X. and Morgan, W. J. (2009), 'Higher education and the starting wages of graduates in China', *International Journal of Educational Development*, 29, 4: 374–381.

Martinelli, D. (1999), 'Labor market performance of French PhDs: a statistical analysis', OECD (Organization for Economic Co-operation and Development), DSTI/STP/TIP(99)2/FINAL.

NSF (National Science Foundation) (2006), *Characteristics of Doctoral Scientists and Engineers in the United States: 2003*, Washington, D.C.: National Science Foundation.

Palmer, A. M. (1941), 'Occupational Orientation', *Journal of Higher Education*, 12: 179–184.

Shinichi, K. (1999), 'Change in the science and technology labor market and its future: are there too many PhD graduates?' OECD (Organization for Economic Co-operation and Development), DSTI/STP/TIP (99)2/FINAL.

Stephenson, R. M. (1958), 'Stratification, education, and occupational orientation: a parallel study and review', *British Journal of Sociology*, 9: 42.

Part III

A growing global perspective

8 Higher education and Chinese teachers

Professional education in the context of China's curriculum reform

Janette Ryan

Introduction

Over the past decade China has engaged in wide ranging curriculum reform at all levels of its education system. As a result, there has been pressure on universities to reform pre-service and in-service teacher professional education to prepare both new and experienced teachers for the challenges and demands of the new K-12 (Kindergarten to Year 12) basic education curriculum reform. The need for new approaches to initial teacher education and continuing teacher professional education and development have been identified as one of the most important and challenging aspects of the curriculum reform programme and necessitates radical and sustainable changes to how universities, schools and teachers work. In this chapter, one approach to this challenge is documented and discussed. Teachers, school leaders and university academics across China are working with university academics and teachers in Australia and Canada through a 'nested circles' professional learning community model. In this model, university academics, contributing to teacher preparation courses, work as partners with teachers and teacher education students in communities of practice to foster teacher-led research into reform of curriculum and pedagogy. This model has proved successful in generating new professional knowledge and skills that are required to develop and sustain major reform of curriculum, teaching practices and teacher education. The progress and achievements to date of this project are considered together with the challenges and dilemmas involved for participants.

China's curriculum reform programme

China's large-scale reform of school educational practices over the past five to ten years is regarded as one of the most important events in China's educational system (Liu, 2006; Zhu 2005; Zhu and Kang, 2002). It encompasses fundamental reform of both curricular content and pedagogical approaches. In 1998 the Chinese government recruited education experts from universities and schools to formulate national curriculum standards for each school subject area. It also re-established free teacher education programmes in six key normal universities (Liu and Fang, 2009). These reforms were launched in 2001 with the release of the

Framework for the Chinese Basic Education Curriculum Reform (Zhongguo jichu jiaoyu kecheng gaige gangyao) published by the Ministry of Education (MoE). In 2001, the MoE issued curriculum standards for Grades 1 to 9 and in 2003 for Grades 10 to 12. In 2001, the new curriculum standards were adopted in 38 experimental districts across the country.

By 2005, every initial grade of primary and middle school was required to begin using the new curriculum. The new high school curriculum was piloted in four provinces in 2004 and scheduled for implementation across the country by 2007. This programme of reform has entailed a move from the 'two basics' (knowledge and skill) to 'quality education' and the promotion of new, student-centred and innovative teaching and learning approaches that aim to develop independent and autonomous learners (Erickson *et al.*, 2008; Lai, 2006; Liu and Fang, 2009; Mitchell *et al.*, 2007; Zhu, 2005; Zhu and Kang, 2002). Radical and systematic transformation of curriculum goals, structure and content, teaching and learning approaches, and assessment and administrative structures has occurred. Unsurprisingly, these changes have posed major challenges for all levels of participants, especially school administrators and teachers, and for those in universities working to prepare teacher education students for these changes. The need to create a well-qualified teaching workforce and to upgrade the qualifications and expertise of existing teachers has been one of the most important elements for the success of the curriculum reform programme (Guan and Meng, 2007; Paine and Fang, 2006; Robinson and Yi, 2007).

Wide-scale reform has also been occurring in China's higher education system (Fang, 2010; Ryan, 2010; Welch, 2010; Yang 2010). This has involved reform of university management and administration structures, academic programme and course structures, and curriculum and pedagogy. It has also included a focus on the quality of teaching and programmes delivered in universities through the development of a comprehensive quality assurance system (Fang, 2010). Given this wide-ranging reform in both China's higher education and basic education systems, it is not surprising that these have given rise to many challenges for university academics, school leaders and teachers working to develop teacher preparation and teacher development (Ryan *et al.*, 2009) and Chinese education academics have played active and significant roles in the reform of both (Kang and Liu, 2010).

The scope and complexities of the basic education curriculum reform have meant that achieving them is not easy and has involved many challenges and tensions and prompted considerable debate within China (Kang and Liu, 2010; Liu and Fang, 2009). As in Canada and Australia, and in other countries experiencing major curriculum reform, it takes some time for such reforms to be implemented in local contexts and requires much effort and fundamental re-thinking of ideas about teaching and learning by academics, teachers and school leaders. Paine and Fang (2007) state that Chinese teachers' work is changing significantly as a result of the curriculum reform, including fundamental rethinking of notions such as 'the good student and the good teacher'. They comment:

> The new curriculum aims at developing a new kind of learner, one who loves learning, is able to solve problems in real-life situations through inquiry and

> creativity, and has the capacity to be a lifelong learner. This vision of a re-defined ideal student necessitates new expectations for what a qualified teacher does and what good teaching entails.
>
> (Paine and Fang, 2007: 282)

The major issues of the reform agenda include:

- changing the teaching and learning focus from 'basic knowledge and skills' to the 'capacity of students to engage in critical thinking, problem solving and creativity';
- changing teacher-centred teaching modes to more student-centred modes, with more emphasis on student engagement, attitudes and traditional Chinese values;
- linking the learning content with real life;
- cultivating a sense of social responsibility, sharing, cooperation and communication;
- establishing an assessment system that promotes students' all-round and individual development;
- promoting a greater variety of textbooks as well as diversified learning resources;
- implementing a three-level curriculum administration system that involves coordination and communication structures between and among national, provincial and school levels; and
- developing a systematic and sustained form of teachers' professional development.

Such wide-ranging and radical reform clearly has important implications for China's intellectual, cultural and even political development, and its importance has been recognized by the high level involvement and support for the reform by the central government through the MoE. To support the reform and ensure its sustainability, the MoE established 16 research centres for basic education curriculum reform at six key universities and institutes across the nation (including for example, Beijing Normal University, East China Normal University and the Central Education Institute) to develop a system of professional education and development for teachers. Most teacher education and professional development in China occurs within schools and there are good links between schools and the many 'normal' universities across China (universities that specialize in Education) and the research centres established by the MoE within these universities. These centres act as bridges between academic research in higher education and teaching practice in schools to develop in-service teacher education programmes as well as pre-service teacher education courses. This demonstrates the importance of the involvement of universities in the curriculum reform process as well as the fact that teacher education programmes are now considered an integral part of Chinese higher education, as is the case elsewhere in the world.

There have been many challenges facing teachers and schools both at the classroom and institutional level. These include:

- insufficiency of curriculum resources;
- over-sized classrooms and traditional teaching approaches;
- difficulties of implementation in rural areas;
- lack of professional support for teachers;
- changing teaching approaches to a more student-centred education;
- empowering teachers to adapt the curriculum reform in response to local conditions;
- developing an evaluation system supportive of curriculum reform.

The insufficiency of new curriculum resources has been identified as one of the most important barriers to the implementation of the curriculum reform programme (Ma and Tang, 2002; Ma *et al.*, 2009; Zhu, 2005; Zhu and Kang, 2002). The universities involved in curriculum reform nationally: in particular, Beijing Normal University (through a team led by Dr Kang; see below) and East China Normal University in Shanghai (see, for example, Zheng, 2009), have been working to address this need and they have already developed innovative and creative curriculum resources for early childhood, primary and secondary levels.

The difficulties of implementing curriculum reform in rural areas has also been problematic, but there have been several government initiatives aimed at improving the qualifications of teachers and the professionalization of the teaching profession in poorer and more remote areas. There has been considerable difficulty in training and retaining teachers to work in areas where conditions are harsh (Postiglione, 2006; Tan, 2009), especially in isolated areas and nomadic areas such as Tibet (Postiglione, 2006) or rural Gansu (Robinson, 2008). Many of the teachers who were working in the former *minban* (community-run) schools in these areas were unqualified (*daike*) teachers but there has been a concerted effort through central government and local government initiatives to improve the qualifications of teachers in these regions (Robinson and Yi, 2007; Postiglione, 2006). The central government has also allocated more resources to remote areas particularly in the western regions of China through extra resources, subsidies and free textbooks (Tan, 2009; Wong, 2009a, 2009b; World Bank, 2008). Government funding to education more generally has greatly increased over the past three to four years, and most of this expenditure has been on improving the qualifications, status and pay of teachers (Robinson and Yi, 2007; Wong, 2009b). There has been increased pressure on educational authorities for existing teachers to undertake formal university teacher training, and rural schools are now permitted to employ only State qualified teachers (Wong, 2009b).

In response to the lower number of students from poorer areas of China attending university, in July 2009 the Ministry of Education announced a preferential enrolment policy for students in the middle and western regions of China (where 30 per cent of the population live, including many ethnic minorities) with the aim of increasing higher education enrolments by 6.5 per cent in the central region and 7.3 per cent in the western regions. As part of this initiative, the six key normal universities will provide free higher education for more than 7,000 teacher education students in return for their agreement to return to their home regions

and teach for a minimum of three years (Tan, 2009). In 2007 the Central Government introduced an even more generous pilot free initial teacher education programme in these key universities which included incentives such as living expenses, fees and guaranteed teaching positions. In return, these newly qualified teachers are required to guarantee to teach in rural or underdeveloped areas for ten years (Liu and Fang, 2009).

The community collaborative project

Beijing Normal University was one of the first research centres established by the MoE in 2001 with the purpose of supporting the national curriculum reform project. One of the key members of the project discussed here, Dr. Kang Changyun, was appointed at that time as the Executive Deputy Dean of this research centre and was attached to the MoE. Dr Kang served as one of the key organizers and coordinators of the national reform research programme and has been actively involved in the Chinese curriculum reform since its inception.

For the purpose of drawing on international experiences of curriculum and pedagogical reform, Dr Kang travelled to North America in June 2004 and visited the University of British Columbia, where he met Professor Gaalen Erickson (also a member of the research team), who has a long history of working with schools and teachers in Canada. Professor Erickson is a leading expert internationally on the development of teacher professional learning through the establishment of Professional Learning Communities (PLCs). The PLC model has been used successfully in many countries undertaking major curriculum and pedagogical reform and is a 'bottom-up' model through which teachers carry out action research projects to improve their teaching and curriculum practices supported by university academics acting as 'critical friends'. These models have proved to be very successful in assisting teachers to adopt and adapt to educational reform in ways that are effective and sustainable (Borko, 2004; Erickson *et al.*, 2005; Fullan, 2001; York-Barr and Duke, 2004). This model has also been used widely in Australia for several decades, in particular through the PEEL Project (Project for the Enhancement of Effective Learning). Dr Ian Mitchell, of Monash University, another member of the project team, was a founder of this network in Australia. Initial concerns about the impact and suitability of the PLC model in different cultural contexts, and the need for English and Chinese language interactions, led to the author joining the team.

Dr Kang established a network of PLCs, called the 'Learning and Development Community' (*Xuexi yu fazhan gongtongti)* in Beijing and Inner Mongolia, working with school and district level colleagues interested in teacher professional development in the context of the new curriculum reform and linked to Beijing Normal University. Dr Kang's intention in introducing this model was in response to the stalling of the reform programme because of its initial 'top-down' nature and the many systemic and other barriers that existed to introducing radical reforms which require different ways of working by universities, schools and teachers.

The tensions involved in introducing major reform of curriculum in any education system have also arisen in the Chinese context (Guan and Meng, 2007; Ma *et al.*, 2009; Wang, 2004; Zhong, 2006). These are due to conflicts and resistance to centrally driven curriculum reform, which have been acknowledged by those taking an active role in driving this reform (see Kang and Liu 2010). These include perceptions that the curriculum reform was initially being introduced in a 'top-down' manner (Ryan *et al.*, 2009) or tensions and resistance to perceived political or cultural interference in local, minority areas. Indeed, the influential Chinese educator and early advocate of educational reform in China, Professor Gu Mingyuan of Beijing Normal University, argues that such tensions are necessary for reform to occur: 'Only after a process of conflict, clashes and confrontation between cultural traditions and modernization can culture be transformed' (Gu, 2001: 106).

The Australian and Canadian experiences of major school curriculum reform also demonstrated that 'top-down' curriculum reform (through the development of system-wide policies and procedures) often has only limited effect. It can be resisted by teachers unless they are able to see the value of changing their teaching practices, receive personal and practical support in how to develop and implement new approaches, and earn support and recognition for their efforts (Ryan *et al.*, 2009). Many teachers in China are receptive to the curriculum changes but find difficulty in knowing how to implement the reforms in their own teaching (Ma *et al.*, 2009). Experiences elsewhere demonstrate that effective and sustainable curriculum reform at both the classroom and institutional level can best be built through collaborative models that give consideration to local contexts and individual teachers. These models have been built through years of teacher-led research supported by school leaders and university academics through the creation of 'professional learning communities' involving educators at all levels of the educational continuum (Borko, 2004; Fullan, 2001; York-Barr and Duke, 2004).

The focus of PLCs is on 'emergent systems of communities'. It is not a 'train the trainer' model where foreign or outside experts visit for short periods of time and deliver some 'pearls of wisdom'. It works through a cycle of action amongst participants, working with university academics as 'critical friends', and then reflection on action and further action. In this model, teachers, school leaders, administrators and academics work as partners in the research process. This model differs from the 'lesson study' model originating in Japan and found elsewhere in China where teachers and pre-service teachers observe a 'master class' taught by an experienced teacher as part of the school's teacher continuing professional learning programme and activities (Paine and Fang, 2006). The LDC project takes a more collaborative and supportive approach where teachers decide themselves what they want to research and improve on according to their existing interests or difficulties and are supported by the principal, other teachers and university academics as 'critical friends'. According to Principal Liu Keqin (Principal of Beijing Zhongguansun Number Four Primary School, and member of the Chinese National Mathematics Curriculum Standards Committee) who is a key leader in the LDC project: 'None of the members of the research team see themselves as

"experts", but rather see our role as simply to put forward suggestions about trying different approaches, because ultimately the strength of the education reforms has to come from the teachers themselves' (Liu, 2007).

In the first phase of the project, a collaborative research network was established with several PLCs in Beijing and Inner Mongolia (schools in other provinces such as in Guangdong, Xinjiang and Shandong have since joined the project). The Australian and Canadian members of the team were concerned to avoid externally imposed, 'Western' ideas of curriculum reform implementation. The PLC model tries to avoid imposing 'top-down' (from outside the school) or culturally inappropriate models (from outside China) by sharing and applying some of the lessons learnt by teachers researching their own practice elsewhere. The aim of this is to implement and sustain effective teacher-driven curriculum and pedagogical reform that works for individual teachers and in local contexts. The PLCs give teachers a framework within which to conduct their own research into areas of practice that are of concern to them, while providing a forum to share their knowledge and receive feedback and validation. The LDCs are also open to pre-service teachers who participate in LDC activities during their regular school placements and several postgraduate students are studying this model for their master's and doctoral degree studies. Indeed, such has been the interest in this project and model that the participating schools have had to limit the number of visits from schools and university academics from elsewhere in China as well as internationally.

The first phase of the project also involved the development of a professional language about concepts of teaching and learning which has facilitated the discussion of ideas and findings across and within contexts. Some concepts such as problem-solving tasks, independent learning, cooperative learning, collaborative group work, and experiential learning were not only sometimes foreign concepts, but quite often there were no commonly agreed Chinese terms for these concepts. Zhong (2006) argues that: '… the most imperative task [in the curriculum reform] is the transformation in the way of thinking and the rebuilding of educational discourse' (375), acknowledging the importance of a shared professional discourse amongst teachers as a foundation for effective curriculum and pedagogical change and dialogue.

The first phase of the project has involved a system of 'nested' PLCs promoting changes through action research, initially at the levels of the classroom, pilot schools and networks of pilot schools. Over the past four years, there have been regular field trips and visits by the research team to the schools, attendance at staff meetings, observation of lessons and debriefing sessions, professional development activities including annual conferences of the network, and systematic documentation and analysis of lessons, debriefing sessions, meetings and other events, including extensive videotaping of activities and events for later analysis and discussion. The activities of the PLCs permeate all aspects of the teachers' professional lives. They engage in research about their own practices and share their insights; observe and provide feedback to colleagues; open their classrooms to outside observers (including parents and teacher education students); attend

lesson debriefing meetings; discuss issues such as lesson and curriculum review and evaluation at staff meetings; participate in online discussion groups such as learning blogs; and attend annual network conferences as well as national and international conferences. The teachers have written their own accounts of the project and their research in project publications, conference presentations and teacher blogs. Interestingly, the research team's observations have demonstrated that many of the dilemmas identified by the Chinese teachers (e.g. how to engage students in problem-solving activities, how to make curriculum relevant to a new generation of children) are precisely the same dilemmas faced by Australian and Canadian teachers.

The second phase of the project entails expanding the network of PLCs in China and the development of wider 'nested' circles, which has already begun at the district, province and national levels. In this phase the team is examining the mobility of ideas and concepts and how PLCs respond to and generate teaching and learning practices relevant to the larger reform agenda. In the next phase of the project we aim to create a sustainable international network of PLCs with both virtual and real linkages between on-going projects in China, Canada and Australia. Funding has been provided by the Canadian Government (through a Social Sciences and Humanities Research Council grant) and in Australia through an Australia–China Council grant for a programme of reciprocal visits between university academics and schoolteachers from the three countries. Work on this has already begun with a programme of exchange visits by Chinese and Australian teachers between China and Australia in 2010.

Despite the enthusiasm and commitment shown overall by the teachers and school leaders and their enthusiasm in participating in the PLCs, however, they sometimes still struggle with issues of a more fundamental nature that may be deeply rooted in culture and cultural practices. Principal Liu expresses the need for fundamental attitudinal and cultural change when she says:

> Chinese teachers have been heavily influenced by Confucianism and these cultural influences on them are very strong. It's called 'Honouring the teacher'; getting children to listen to the teacher, and thinking that children who listen to the teacher are good students … But now, we want to learn more about how to respect other people, and that means helping children to become more mature and more independent of teachers, how to become more self-confident. So the first thing that teachers need to do is to treat children as equals, in the way that they talk with them and the ways that they work with them; they need to listen carefully to what children are saying to them.
>
> Interview with Principal Liu Keqin, Beijing, March 2007

The project has also illustrated that the conventional ways that universities and university academics in China work with schools and teachers need to change in order to promote and sustain curriculum reform. Li Yuping outlines the various challenges to teacher education at universities entailed in the reform programme:

> When the curriculum reform was implemented, it was met with all kinds of resistance and created conflicts that we could never have imagined. For example, teachers were confronted with specific teaching and learning problems emerging in their classroom that they didn't know how to deal with. A new inquiry system to support the teachers to implement the new curriculum was needed. There was also a lack of appropriate support from academic researchers due to the fact that they were inexperienced and disconnected from classroom practice. The university academics were not welcomed by school teachers due to their big gap with practice. The model of collaboration among teachers, curriculum facilitators and university colleagues was very superficial and ineffective.
>
> LDC research project team leader, Li Yuping, in Liu and Li 2009

Resistance to the curriculum reforms has been noted elsewhere (Guan and Meng, 2007; Paine and Fang, 2006; Zhong, 2006) especially where professional development has been mandated, such as in Shanghai where teachers are reported to often be rather 'dismissive' of new requirements and 'chafing at [their] restrictiveness' (Paine and Fang, 2007: 284). Teachers in Shanghai reported that they sometimes felt that reflection was imposed on them and was a form of 'contrived collegiality' (Lai, 2006: 2). Paine and Fang reported that collegial interaction and the more 'organic' forms of teacher professional development are most highly valued by teachers, such as the types employed in the LDC schools where teachers collaboratively work together and where the 'links to practice are close and visible' (2007: 284).

Another potential barrier identified as an impediment to reform is China's oversized classrooms. However, at several of the schools in the LDC network, including in areas such as Inner Mongolia, where class sizes can range between 30 and to up to 70, there is clear evidence of creative and innovative teaching and learning practices through the use of strategies such as collaborative group work and student portfolios. At the 3rd International Forum on Teacher Education in Shanghai in November 2007, several primary and secondary teachers in the LDC project from Beijing, Inner Mongolia and Guangdong presented a diverse range of new pedagogical approaches, such as collaborative teacher inquiry and professional portfolio development (Beijing Number Four Primary School Principal Liu, in Liu and Li 2009); collective lesson preparation and debriefing (Dongsheng District, Ordos City, Inner Mongolia teachers, Li and Gao, 2007); small group work and peer assessment (Wuhai City, Inner Mongolia teachers, Wang and Wang, 2009); student portfolios (Dongsheng District, Ordos City, Inner Mongolia teacher Guo, 2007); and the creation of online communities of teachers to share teaching resources and strategies and provide common support (Baoan District, Shenzhen teachers, Li and Li, 2007). These are aimed at providing more collaborative and supportive professional education and development, as well as providing a teacher inquiry-based model to empower teachers to adapt their teaching to the new curriculum reform in their own contexts.

One of the main objectives of teachers in the LDC project has been to move away from examination-based forms of assessment of student learning; and

teachers in the network have experimented with a range of strategies. For example, Inner Mongolia Teacher Guo described how she uses student portfolios as a more formative method of assessment and to promote students' autonomy and self-regulation:

> With the support of the international LDC project research team, I have made efforts to integrate portfolio assessment within my subject teaching. I start by facilitating students to develop their own learning criteria, which they then discuss and negotiate as a whole class activity. I have explored a whole host of effective strategies in my reading and writing lessons. I ask my students to develop concept maps for their portfolios from their reading which has proven very effective for their learning. I have witnessed an enormous development in students' self-assessment abilities. I have also developed a much broader and deeper understanding of students' learning development and their individual characteristics. I believe that my teaching has improved and that I have become a more reflective teacher.
>
> Guo, 2007

Despite the often very different cultural contexts, it is clear that the changes teachers in the LDC network want to make, and the potential barriers to these, are remarkably similar to those that teachers outside China find problematic. These include group work, open-ended problem solving tasks, links to the outside world and respecting and using students' ideas. For example, Wang Fanlian, a teacher at Guanming Road Primary School in Wuhai City in Inner Mongolia, states:

> I often find that when students are working in groups, they just express their own ideas and either don't listen to others or don't care what others say. I think this is only shallow collaboration. So I've tried to find a way to promote deeper and genuine collaboration … I get them to identify some rules to govern the processes of the group, first on their own and then they have to negotiate the final rules within the whole group. This has resulted in the groups working more collaboratively and effectively … They are becoming more and more capable in their learning, thinking and cooperating and communicating with others. At the same time, I have been consciously trying to transform myself. Now I've realized that teachers need to consciously develop their daily classroom strategies in order to become more professional.
>
> Wang, 2006

Teacher Wang has also introduced student collaborative learning through peer marking of homework and assignments:

> I have been thinking that the traditional way of dealing with assignments is only between the teacher and the student. I think this is a tremendous waste. I have tried to find a better way to make full use of students' assignments as a springboard and an impetus for other students to learn from; they can learn

> from and enlighten each other. So, for example, I now use a strategy called 'Exchanging your workbook with your classmates' where students have to assess other students' work and finish their own homework in another student's workbook for them to check.
>
> Wang, 2006

A continuing concern has been the development of an evaluation system that is consistent with the aims of the curriculum reform; a concern common with the general concern about quality assurance of teaching in the reform of the higher education system in China more broadly (see Fang, 2010). This has been difficult because of the continuing influence of China's 'examination orientated' (*yingshi jiaoyu*) system. It is recognized that this is a major 'weakness' in the education system (Gu, 2001: 116) and there has been much debate on this issue amongst Chinese educators (see Kang and Liu, 2010). Alternative methods are being developed, such as through the use of student learning portfolios and peer assessment mentioned above. More formative types of assessment are increasingly being adopted and the simple use of grades and scores is becoming less dominant and assessment strategies are becoming more commonplace as teachers develop and share their ideas and experiences.

Learning and teaching across cultural boundaries

There has been concern in China, as well as in the project team, about the appropriateness of adopting and adapting foreign educational practices. The need for caution in applying 'Western' teaching and learning ideas, without consideration of local contexts and existing knowledge and expertise, has been voiced by many Chinese educationalists (Guan and Meng. 2007; Hu, 2002; Jiang, 2005). Professor Gu Mingyuan, however, argues that such cross-cultural 'borrowings' are part of the dynamic of cultural transformation:

> Cultural traditions are dynamic and ever developing. To carry forward Chinese culture does not mean that we have to say no to foreign cultures. On the contrary, if China wants to have its own national culture developed, it has to constantly absorb foreign cultures. However, we have to make wise choices.
>
> Gu, 2001: 105

Gu argues for the internationalization of education in China as well as its 'nationalization'; that is, reform with 'Chinese characteristics.' There has been a concerted effort in China to preserve the best elements of Chinese educational traditions and this is explicitly recognized in the objectives of the curriculum reform, as listed above: 'Changing teacher-centered modes to more student-centered modes, with more emphasis on student engagement, attitudes and *traditional Chinese values*' [emphasis added]. According to Paine and Fang (2007: 279) Chinese educators: '… appear to be constructing hybrid models that rely on insider and outsider expertise'.

Teaching ideas that have been developed in Australia and Canada have been very positively received by the Chinese teachers. Often they have already been doing something similar; learning about these ideas helped them to reframe their practice in ways they found useful or sometimes simply gave them a professional language to be able to articulate and discuss what they were doing (Ryan *et al.*, 2009). One idea that resonated strongly with teachers in both Beijing and Inner Mongolia was building a list of 'Good Learning Behaviours' with students displaying these in the classroom and using them as part of their classroom discourse about learning. Many of the teachers have used the 'Good Learning Behaviours' concepts to frame their research, especially around developing students as autonomous and independent learners.

While there are many similarities in the way collaborative action research is conducted in China, Canada and Australia, there are also some differences. Teachers in China routinely open their classroom for observation by other teachers (Lai 2006; Paine *et al.*, 2003; Sargent and Hannum, 2008; Xu, 2008) for school-based staff development as part of their routine professional development activities (*jiaoyan huodong*), a practice rarely found in Western contexts. Chinese teachers seem to be much more open to critique, and observation followed by discussion or debriefing is central to the teaching process. The research team observed this practice in all of the schools visited. This difference in culture means that the role of academic 'critical friends' may be a little different than it is in Canada and Australia. One of the articles in the project's first book (Li and Men, 2006) was written jointly by a teacher and Li Yuping, another key member of the project team and one of the leaders of the local PLC networks working with the schools in Inner Mongolia. Mr Li observed Teacher Men's lesson and then took a more proactive role in the debrief feedback session than would usually occur in Australian or Canadian contexts. Li asked the teacher why she always asks the high achieving students (who put up their hands) and not others to answer her questions. Through a series of exchanges it became clear that the teacher had never thought of doing anything else. Eventually, in reference to the students who had not put up their hands, she said: 'They won't put up their hands and can't answer questions even if picked. It would be a waste of time and the teaching task may not be fulfilled.' Li pursued this revealing comment and eventually they arrived at what was a very significant rethinking of teaching by the teacher, but which was only reached by some persistent interrogation by him that went well beyond what we would do in our contexts. Teacher Men then commented to Li that she would take these suggestions on board in her future teaching practice.

The mobility of ideas and diversity of contexts

The international scope and design of the project enabled a consideration of the 'mobility and movement' of pedagogical practices and understandings across different teaching communities and contexts (Eraut, 2004). It was discovered that there were similar perspectives on the value of teacher research, on the benefits of a more open classroom, on the role of the teacher as a facilitator of learning, and

that there can be reciprocal learning about the strengths of each system. According to Gu Mingyuan:

> Internationalization does not refer to the integration of different cultures or the fact that one culture replaces another. It refers to international exchange and mutual understanding among different nations. All nations should interpret into their own cultures the strengths of others.
>
> Gu, 2001: 164

It should be noted that the LDC schools are not typical of most State schools, but do represent many similar initiatives underway in schools across China. Several other Chinese and international research teams have also been working with schools and networks of schools and government educational administrators in researching and supporting the curriculum reform programme (see Paine and Fang, 2006, 2007; Paine *et al.*, 2003; Robinson, 2008; Sargent and Hannum, 2008). In addition, the schools involved in the project are in contact with schools across the north, south, east and western regions of China, through online blogs and teacher professional learning networks.

It should also be noted that although the Government's stated intention is to move towards 'quality' education and away from an examination focused system (Gu, 2001; Wang, 2003), which has been heavily criticized as one which 'enslaves' students and 'devastates talented students' (Zhong, 2006: 370), most schools are still very examination orientated and competitive, and characterized by 'high stakes' testing. However, as shown here, there are attempts to move beyond these restrictive practices and embody the spirit of the curriculum reform programme.

These initiatives serve to illustrate the diversity of approaches being undertaken and reflect the rapid and profound physical, social and cultural transformations currently occurring in China. They also serve to counter the often negative perceptions of Chinese classrooms and Chinese students found in much of the literature in the West on 'the Chinese learner' which characterizes a rote, passive and superficial learner lacking critical thinking skills (Clark and Gieve, 2006). These perceptions have often been based on partial or misunderstandings of Chinese students (Ryan and Louie, 2007) and are generally based on observations of newly arrived Chinese international students struggling to adapt in Western learning environments. China is changing so radically that such stereotyped descriptions of teaching and learning practices by Chinese students and teachers are increasingly out of date (Hu, 2003, 2005; Jin and Cortazzi, 2006; Ryan and Louie, 2007; Shi, 2006) due to the nature of contemporary education contexts and learner diversity in China (Fan *et al.*, 2004; Hu, 2003, 2005; Shi, 2006) and as demonstrated by the LDC experience.

Although some of the lessons observed were primarily transmissive in nature, most were not, with students offering and defending ideas and making choices and decisions in open tasks. Some of the classes that we observed would be considered excellent examples of student-orientated and active, engaged learning in any context. While the lessons observed were not representative of all Chinese

classrooms they did show a degree of student independence similar to what would be likely in a similar sample taken in Australia or Canada (Erickson *et al.*, 2008). At many schools in China, especially in large cities such as Beijing, Shanghai and Guangzhou, but also in more remote areas such as the schools involved in the project in Inner Mongolia and more recently in Xinjiang, this type of work is well advanced and is an indication of the impact of the collaborative curriculum reform work being undertaken between educators at university and school levels described here.

Conclusion

The three countries involved in the project are very large and have a diversity of schools and universities, local contexts and teachers, while educational reform needs to address local contexts and concerns. Despite these vastly different contexts and conditions, teachers and teacher educators often face remarkably similar challenges and can find shared ways to address these challenges. Often more diversity can be found among different cultural contexts than between them, so the value of the project is in its potential for learning *between* and *among* the partners (Ryan and Louie, 2007). The project has demonstrated that such learning is not one-way or one-sided but has generated greater knowledge and understanding between and among educationalists on all sides at both higher education and basic education levels. It has also demonstrated the need to take into account not just national contexts and imperatives but also local ones.

Further networks of teachers working alongside university academics are being developed as the teachers and the schools consolidate their own work and then offer their expertise to others and, in turn, learn from the efforts of other teachers also engaged in changing their pedagogical and curriculum practices. Several other universities in China have now also joined the project, so the work of the LDCs is being expanded into other areas across China. Further work on the project will contribute to common understanding of how educational reform can be sustained by collaborative work by teachers, school leaders, district personnel and university academics at the classroom and school levels, and eventually at the broader school system level. The LDC project will also contribute to understanding how ideas move between and play out in different contexts and cultures. Zhong (2006) argued that the international 'hot trend' in 'teachers as researchers' has not been adopted in China, yet the LDC project reported here is a clear and successful emergent example of such an approach.

In their review of the progress of the curriculum reform and the collaboration between educators in higher education and basic education in China, Kang and Liu (2010), two academics at Beijing Normal University and key initiators and organizers of the reform programme, conclude that although the curriculum reform process has been ambitious and has received both enthusiastic support as well as provoked tensions and criticism, there is no doubt that the reforms are now deeply embedded and are here to stay. These reforms and efforts across China are continuing to inform both the development of initial teacher training programmes

in Chinese universities and also work on improving continuing professional education for teachers across China.

References

Borko, H. (2004), 'Professional development and teacher learning: Mapping the terrain', *Educational Researcher*, 33: 3–15.

Clark, R. and Gieve, S. (2006), 'On the discursive construction of "The Chinese Learner"', *Language, Culture and Curriculum*, 19: 54–73.

Eraut, M. (2004), 'Informal learning in the workplace', *Studies in Continuing Education*, 26: 247–274.

Erickson, G., Mitchell, I., Kang, C.Y. and Ryan, J. (2008), 'Role of teacher research and cross-cultural collaboration in the context of curriculum reform in China', in A. Samaras, C. Beck, A. Freese and C. Kosnik (ed.) *Learning communities in practice*: Springer.

Erickson, G., Mitchell, I., Minnes, C., Brandes, G., and Mitchell, J. (2005), 'Collaborative teacher learning: Findings from two professional development projects', *Teaching and Teacher Education*, 21: 787–798.

Fan, L.H., Wong, N.Y., Cai, J.F., and Li, S.Q. (eds) (2004), *How Chinese Learn Mathematics: Perspectives from insider*, Singapore: World Scientific Publishing.

Fang, H.Q. (2010), 'Reform and development of teaching assessment in China's higher education Institutions', in J. Ryan (Ed,) *China's higher education reform and internationalization*. London: Routledge.

Fullan, M. (2001), *Leading in a Culture of Change*, San Francisco: Jossey-Bass.

Gu, M. (2001), *Education in China and Abroad: Perspectives of a lifetime in comparative education*, Hong Kong: Comparative Education Centre, University of Hong Kong.

Guan, Q. and Meng, W. (2007), 'China's new national curriculum: Innovation, challenges and strategies', *Frontiers in Education in China*, 2: 579–603.

Guo, X. (2007), 'Developing a portfolio project in a reading and writing classroom with my students' (*He haizimen yiqi jian dangandai*), paper presented at the 3rd Innovation and International Forum on Teacher Education in Shanghai, China, 14–16 November (in Chinese).

Hu, G. W. (2002), 'Potential cultural resistance to pedagogical imports: The case of communicative language teaching in China', *Language, Culture and Curriculum*, 15: 93–105.

Hu, G. W. (2003), 'English language teaching in China: Regional differences and contributing factors', *Journal of Multicultural and Multilingual Development*, 24: 290–318.

Hu, G. W. (2005), ' "CLT is best for China" – An untenable absolutist claim', *ELT Journal*, 59: 65–68.

Jiang, K. (2005), 'The centre–periphery model and cross-national educational transfer: The influence of the US on teaching reform in China's universities', *Asia Pacific Journal of Education*, 25: 227–239.

Jin, L.X. and Cortazzi, M. (2006), 'Changing practices in Chinese cultures of learning': Language, *Culture and Curriculum*, 19: 5–20.

Kang, C. Y. (2007), 'Teacher learning and developing community' (Jiaoshi xuexi yu fazhan gongtongti), International Learning and Developing Community Collaborative Project First Annual Conference (*Jiaoshi xuexi yu fazhan gongtongti guoji hezuo xiangmu shoujie nianhui)*, Dongsheng, Inner Mongolia, 18–20 July 2007.

Kang, C. Y. and Liu, J. (2010), 'Reflection in action: Ongoing K-12 curriculum reform in China', in J. Ryan (Ed) *Education Reform in China*. London: Routledge.

Lai, M. (2006), 'Approaches to teacher development in China: Hong Kong and Shanghai', paper presented at the 34th Annual Conference of the Australia New Zealand Comparative and International Education Society on 'Global governance, educational change and cultural ecology', Canberra, 30 November-3 December 2006.

Li, D. and Li, Z. (2007), 'Complicity and collective improvisation in school-based teacher inquiry' (*Jingxin cehua – youxiao yajiu*), paper presented at the 3rd Innovation and International Forum on Teacher Education in Shanghai, China, 14–16 November (in Chinese).

Li, Y. and Men, L.L. (2006), 'Examining our "blind spots" in the classroom', Towards Excellence, Beijing Zhongguansun No. Four School, Beijing, 2006.

Li, Y. and Gao, X. (2007), 'Collaborative reflection on our school-based inquiry journey', paper presented at the 3rd Innovation and International Forum on Teacher Education in Shanghai, China, 14–16 November.

Liu, K. (2006), *Engaged education (Zhuti jiaoyu)*, Beijing: Beijing Normal University Press (in Chinese).

Liu, K. (2007), 'Towards excellence: Footprint of a school research team' (*Yige xuexiao jiaoshi yanjiu tuandui de chengzhang*), paper presented at the 3rd Innovation and International Forum on Teacher Education in Shanghai, China, 14–16 November (in Chinese).

Liu, K. and Li, Y. (2009), 'Collaborative narration: Our story in a cross-cultural professional learning community', China's Education Reform: Radical Shifts and their Implications (Conference). Oxford: University of Oxford, 27–29 March.

Liu, Y.B. and Fang, Y.P. (2009), 'Basic education reform in China: Globalization with Chinese characteristics', *Asia Pacific Journal of Education*, 29 (4): 407–412.

Ma, Y. and Tang, L. (2002), 'The implementation of the new curriculum: The status quo and countermeasures' (*Xinkecheng shishide xianzhuang yu duice – Bufen shiyanqu pinggu jieguode fensi yu sikao*), *Journal of Northeast Normal University*, 5: 124–129 (in Chinese).

Ma, Y., Yin, H., Tang, L., and Liu, Y. (2009), 'Teacher receptivity to system-wide curriculum reform in the initiation stage: A Chinese perspective', *Asia Pacific Education Review*, 10: 423–432.

Mitchell, I., Ryan, J., Kang, C.Y., and Erickson, G. (2007), 'Role of teacher research and cross-cultural collaboration in the context of curriculum reform in China', paper presented at the International Conference on Teacher Research, Chicago, 13–14 April.

Paine, L. and Fang, Y. P. (2006), 'Reform as hybrid model of teaching and teacher development in China', *International Journal of Education Research*, 45: 279–289.

Paine, L. and Fang, Y. P. (2007), 'Challenges in reforming professional development', in E. Hannum and A. Park (ed.) *Education and Reform in China*, London: Routledge.

Paine, L., Fang, Y.P., and Wilson, S. (2003), 'Reform as hybrid model of teaching and teacher education', International *Journal of Educational Research*, 45: 279–289.

Postiglione, G. (2006), *Education and Social Change in China: Inequality in a market economy*, New York: M.E. Sharpe Inc.

Robinson, B. (2008), 'Using distance education and ICT to improve access, equity and the quality in rural teachers' professional development in western China', *International Review of Research in Open and Distance Learning*, 9: 1–17.

Robinson, B, and Yi, W. (2007), 'The role and status of non-governmental ("*daike*") teachers in China's rural education', *International Journal of Educational Development*, 28: 35–54.

Ryan, J. (ed.) (2010), *China's Higher Education Reform and Internationalization*, London: Routledge.

Ryan, J., Kang, C.Y., Mitchell, I. and Erickson, G. (2009), 'China's basic education reform: An account of an international collaborative research and development project', *Asia*

Pacific Journal of Education, Special issue on Primary and Secondary Education Reform in China: Globalization with Chinese Characteristics.

Ryan, J. and Louie, K. (2007), 'False dichotomy? "Western" and "Eastern" concepts of scholarship and learning', *Educational Philosophy and Theory*, 39: 404–417.

Sargent, T. A. and Hannum, E. (2008), 'Doing more with less: Teacher professional learning communities in resource-constrained primary schools in rural China', paper presented at Conference on Poverty, Education, and Health in Rural China, University of Oxford, Oxford, 15–16 December.

Shi, L. J. (2006), 'The successors to Confucianism or a new generation? A questionnaire study on Chinese students' culture of learning English', *Language, Culture and Curriculum*, 19: 122–147.

Tan, Y. (2009), 'More university spots go to poor', *China Daily*, 17 July.

Wang, F. (2006), 'Developing strategies collaboratively with my students' (*Celüe banhe wode xuesheng gongtong chengzhang*), paper presented at the Towards Excellence: Learning Development Community Annual Conference (*Zouxiang zhuoyue: Xuexi yu fazhan gongtongti nianhui*), Zhongguancun, Beijing, August.

Wang, J. (2004), 'Patterns of development of Chinese teacher education in a reform context', in Y.C. Cheng, K.W. Chow and M.C. Mok (eds), *Reform of Teacher Education in Asia Pacific in the New Millennium: Trends and challenges*.

Wang, L. and Wang, F. (2009), 'Stories from our teaching strategies room' (*Celüeshi de gushi*), paper presented at the 3rd Innovation and International Forum on Teacher Education in Shanghai, China, 14–16 November 2007 (in Chinese).

Wang, X. F. (2003), *Education in China since 1976*, North Carolina: McFarland & Company.

Welch, A. (2010), 'Enter the Dragon: The internationalization of China's higher education system', in J. Ryan (ed.) *China's Higher Education Reform and Internationalization*, London: Routledge.

Wong, C. (2009a), 'The challenge of providing free education in rural China: A glimpse from the southwestern provinces', paper presented at China's Education Reform: Radical Shifts and their Implications (Conference), University of Oxford, 27–29 March.

Wong, C. (2009b), 'China's public service delivery system', paper presented at the Colloquium on Building a Harmonious Society in China: Reducing Poverty and Improving Public Services, University of Oxford, 16 May.

World Bank (2008), *Gaishan nongcun gonggong fuwu* (*China: Public Services for building the new socialist countryside)*, World Bank East Asia and Pacific Region. Beijing: China Citic Press.

Xu, Y. Z. (2008), 'School-based teacher development through a school-university collaborative project', paper presented at the Asia-Pacific Conference on International Education in Shanghai, China, 18–20 October.

Yang, R. (2010), 'Chinese ways of thinking in the transformation of China's higher education system', in J. Ryan (ed.) *China's Higher Education Reform and Internationalization*, London: Routledge.

York-Barr, J. and Duke, K. (2004), 'What do we know about teacher leadership? Findings from two decades of scholarship', *Review of Educational Research*, 74: 255–316.

Zheng, X. (2009), 'Life Science curriculum in Shanghai middle schools', paper presented at the *China's Education Reform: Radical shifts and their implications* (Conference), University of Oxford, 27–29 March.

Zhong, Q. (2006), 'Curriculum reform in China: Challenges and reflections', *Frontiers of Education in China*, 3: 370–382.

Zhu, M. (2005), 'Report on the current state of the basic education reform in China' (*Zhongguo jichujiaoyu zhuangkuang baogao, zai daxue zhongxiaoxue zhengfu zai jiaoyu gaige zhong de celue huoban guanxi shang de baogao*), presentation at the University, Schools and Government in Educational Reform International Perspectives Invitational Conference, in Beijing, October (in Chinese).

Zhu, M. and Kang, C. (2002), 'Towards a new curriculum: Dialogues with curriculum participants' (*Zoujin xin kecheng: yu kecheng shishizhe de duihua)*, Beijing: Beijing Normal University.

9 Education reform in Hong Kong

Implications for higher education and lifelong learning

John Cribbin

Introduction

As is well known, Hong Kong returned to Chinese sovereignty in 1997 following some 150 years as a British colony. The event had been well signposted. Negotiations concerning the future of Hong Kong began in 1982 and were much debated locally and internationally in those 15 years. A number of myths arose about the prospect of the world's freest economy being returned to the embrace of the world's communist superpower. There was, for example, the myth that the professional classes would desert Hong Kong and, indeed, emigration became an important issue and indirectly impacted on the progress of education reform, prompting the expansion of local university places. Emigration proved to be just that in fact, a myth. As later figures showed, in the period prior to 1997 there was net immigration and many of those who did emigrate to secure passport rights elsewhere subsequently returned to Hong Kong. The world's reporting of the actual handover emphasized the dramatic entry into Hong Kong of the People's Liberation Army – yet the reality is that China only has half the number of troops stationed in Hong Kong that the British had at the end of their regime – and they are very hard to find, unlike the British forces in their time.

The 12 years since 1997 were successful in terms of 'one country, two systems' and impact on daily life in Hong Kong has been minimal. In fact, it is the changes in China itself that are more significant in the China/Hong Kong relationship than change in Hong Kong, which is still listed as one of the world's most free economies (*Economist*, 2009). Indeed, the fact is that in education and many other fields, Hong Kong, as stated under the 'Basic Law' that governs it, is an independent entity and therefore sets its own policies in all areas except defence and foreign policy (Basic Law, 2009). Yet, as part of China, Hong Kong needs to be aware of the national dimension as well as the international dimension. It is a good sign of the flexibility of 'one country, two systems' that the handover has been relatively smooth with the possible exception of the community's aspirations for universal suffrage.

In other respects, China's resumption of sovereignty has been greatly to Hong Kong's benefit. This was particularly seen in the aftermath of the 1997 Asian financial crisis and even more so after the Severe Acute Respiratory Syndrome

(SARS) crisis in 2002/3. In both cases the finance sector (an important part of the Hong Kong economy) was badly impacted while in the SARS crisis tourism was also affected. People stopped travelling worldwide, particularly to Hong Kong as it was perceived as a major source of the infection. This affected the hotel and restaurant sector in particular and also education, as schools and other educational institutions (including higher and continuing education) were closed. So severe were the crises that a number of pay cuts were implemented even in the public sector and unemployment rose. As one of the responses, China liberalized its visa policies to allow many more mainland tourists to visit Hong Kong, which undoubtedly helped the tourist industry to recover quickly and exceed former levels. Also, China's membership of the World Trade Organization (WTO) since 2001 has also helped Hong Kong, particularly with the 'Closer Economic Partnership Agreement' (CEPA) that has been extended to Hong Kong in a wide range of manufacturing and service fields. CEPA helped Hong Kong's links with the mainland and emphasized its role as a gateway to China and a crossing point for East and West. This role, which in many instances is referred to as a 'hub role', is an important aspect of the Hong Kong economy.

Education reform in Hong Kong

Turning to education policy and more particularly to the lifelong learning sector, what has been the impact and what is likely to be the impact of the changes since China's resumption of sovereignty? Just as China's road to the Olympic Games was a long haul, with a failed bid for 2004 being followed by a successful bid for 2008, with the process therefore extending well over ten years, so have education reforms in Hong Kong extended over a long period given that 2012/13 is the target date for full implementation of changes initiated since 1997.

After 1997 there was a review by the Hong Kong Government's Education Commission, the first comprehensive review for many years. This produced a series of consultative documents entitled 'Learning for life, learning through life', published from 1998 to 2000, and these covered the whole sector from pre-primary to university and continuing education (Education Commission, 2000). The characteristics of the Hong Kong system prior to reform had been that the school system was modelled closely on the British system, six years of primary education followed by five years secondary and a further two years to the A-level stage which then led on, for successful students, to university entry to a three-year honours degree. However, the system was elitist; nine years' free education was only introduced in 1979 and there were many obstacles to progress embedded in the system. Those students who were less academic would leave at secondary three level and proceed to vocational education or the work force, whilst at Hong Kong Certificate of Education Examination (HKCEE) level (Secondary five, equivalent to GCSE) the progression rate was less than 50 per cent to the A-level stage. This was then followed by a three-year honours degree at university level following the British model: this option was open to only 18 per cent of the age group cohort by 1997. The system is further compounded by the language issue

for Hong Kong students who need to be trilingual and biliterate: that is, to be able to speak Cantonese, Putonghua (Mandarin) and English and to read and write both in English and Chinese.

Prior to 1997 the vast majority of secondary schools nominally taught in English. The reality was recognized that this was not wholly effective and, after 1997, only about 100 of 450 secondary schools were permitted to teach in English, the rest used the mother tongue (Cantonese). The result of this has been somewhat mixed in that learning generally has been assessed to have been more effective in the mother tongue, but such students have been marginally disadvantaged in terms of university entry as their achieved English standard has been lower than those who had studied in the English language system. In 2009 the policy was relaxed somewhat to allow more schools to teach in English where they were assessed as being able to do so.

However, the principal significance of the 1999 reforms is that it was determined that the whole secondary system will change to a six-year system, as in the United States and many other parts of world, including mainland China, with a secondary school curriculum designed in two stages, 3 + 3, being a junior three years and a senior three years. The senior secondary element will lead to a new Diploma in Secondary Education (DSE) at the end of Form Six and all students are expected to progress to this stage. This school-leaving diploma will then be considered for university entry to a four-year degree curriculum, again similar to the United States or China and to many other parts of the world. It is therefore a huge system change that is currently in progress and the timeframe is that the first cohort to enter the four-year degree programme will be in 2012. The changes are referred to as 3 + 3 + 4.

As things currently stand, the first of the student cohorts completed the junior secondary part of the new six-year curriculum in 2008/09, and progressed to the senior secondary stage, the second of the three year elements, in 2009/10. Following this, they will enter the universities in the 2012/13 academic year. Meanwhile the last cohort under the old system is also progressing to enter the A level stage in the 2010/11 academic year and will also enter university in the 2012/13 academic year having completed Form Seven. As a consequence there will not be an F5 school-leaving cohort in 2011, which will also have an impact on educational providers. Thus, the universities have a difficult transition period from 2012/13 with two cohorts entering higher education, one to a three-year degree and one to a four-year degree. The current school age population is given in Table 9.1.

Table 9.1 Student enrolment by level of education (thousands)

	2001/2	*2005/6*	*2006/7*	*2007/8*	*2008/9*
Primary	493.1	425.9	414.5	389.9	369.0
Secondary	465.4	482.3	505.0	513.8	511.5

Source: Hong Kong, 2007, 2008.

The primary school age student population has been declining while the secondary numbers have been increasing but will soon, inevitably, decline as the fall in primary numbers takes its course. In fact this phase began in the 2010/11 academic year. However, the current situation is that about 5 per cent of students leave at secondary three and only some 35 per cent progress from secondary five to secondary six and seven. This is around 30,000 students and there are only 14,500 funded first year university places – 18 per cent of the age cohort. However, only some 17,500 students annually matriculate, plus about 8,000 repeaters. At HKCEE level there are some 85,000 school students sitting annually plus some 25,000 repeaters. The introduction of the Associate Degree and Higher Diploma awards since 2000 has helped to meet this demand for those unable to progress, but has also fuelled demand for more 'top-up' degree places – only some 2,000 second year places are available in the funded university system. The double cohort of 2012/13 will cause temporary problems of availability of places, but thereafter the size of the age group cohort drops from 71,846 in 2014, to 55,000 in 2021 and an estimated 35,000 in 2023 (SCMP 2008; Olsen and Burges 2007). The demographic change in the second decade of this century will be borne mainly by the self-funded sector in higher and continuing education which has expanded and is still expanding now to meet current demand but which will have to contract later as the cohort size declines.

The diploma in secondary education

The new Diploma in Secondary Education (DSE) has four core subjects: Chinese language, English language, Mathematics and Liberal Studies (a broad-based syllabus covering Science and Humanities). These take up between 45 per cent and 55 per cent of the curriculum. Students then choose two to three electives from a choice of 20 academic subjects from learning areas such as Science, Humanities, Technology, Arts and Physical Education. A range of more vocational 'Applied Learning' courses is also available for the more vocationally oriented students. Other languages can also be studied for international examinations. These electives cover between 20 to 30 per cent of curriculum time with the remaining 15 to 35 per cent being allocated to other learning experiences covering moral/civic education, sport, aesthetics, community service and work experiences. (http://www.hkea.edu.hk/en/IR) The aim is to promote a whole person approach and to foster lifelong learning habits in the different areas. Assessment is school-based plus one public examination with a focus on analysis and problem solving rather than rote learning. An outcomes based approach is adopted and a five-point scale from 1 to 5 is adopted with the top grade being differentiated as 5, 5* and 5**. There is to be benchmarking to international standards and international recognition is being sought from overseas countries. How successful these school reforms will be remains to be seen, a preliminary assessment highlights bottlenecks and the impact on teachers and school education (Cheng, 2009).

Nevertheless, the indications are that the search for international recognition has been successful. Although the first cohort of DSE holders will not graduate

until 2012 the Hong Kong Examination and Assessment Authority (HKEAA) has secured recognition for the new qualification from a number of overseas jurisdictions, notably USA and Australia but also the UK. Despite the fact that the secondary curriculum will be one year shorter than in the UK it has been accepted by UCAS for university entry at defined levels of achievement (HKEAA, 2010). This is largely on the strength of the high reputation of the Hong Kong school system as evidenced by strong regard for the existing A level and good performance in international comparisons such as the Program for Student Assessment (PISA). Also in practice the new curriculum is effectively less than one full academic year shorter because time is saved through the abolition of one set of public examinations – the existing Hong Kong Certificate of Education.

Following the new secondary curriculum, the universities are currently designing the new four-year curriculum that will have elements of liberal and general education as well as maintaining current academic content and standards. Essentially the first two years will have core curriculum requirements to ensure that students have a broad-based learning experience as well as an introduction to the disciplines of choice with more specialized work occurring in the third and fourth years. These changes will also be important for the private or lifelong learning sector of higher education.

The funded and non-funded sector of higher education

The other principal reform agenda that has been progressing in Hong Kong is the massification of higher education. This has been largely achieved through a process of marketization and regulation. Government-funded university places have been capped at 14,500 since the mid-1990s and there is little sign that this will change in the near future. In fact, it should be noted that Hong Kong is somewhat of a conundrum. On the one hand, the government subscribes to laissez-faire policies and freedom for the market, a fact that is still recognized in various world rankings, which show that Hong Kong still ranks as one of the freest economies. On other hand, in some fields such as housing and education there is heavy regulation where the state is an important funding authority, for example, almost half the housing stock is public housing. In the schools and the university sector, state provision is also very significant. There is very extensive state control, even at the university level, down to the numbers entering individual degree programmes. The numbers are firmly controlled by the University Grants Committee (UGC) and prescribed across the eight publicly funded universities. Whilst the UGC is structured as a nominally independent buffer between government and the universities, its role is largely perceived as an organ of government policy. In terms of education generally, government funding has remained relatively generous. There have been cuts in higher education funding by some 21 per cent between 1999 and 2005 but this is less than in other developed economies (and with growth in budgets to 2008 the 'cut' is now less than 10 per cent). Partly this is because the Hong Kong government realizes that human resources are Hong Kong's major asset and so education funding is seen as investment for the future. The UGC has

also fostered a shift in emphasis. For example in the mid-1990s it required continuing education to become self-financing while in the mid-2000s the taught postgraduate course sector has had to become self-financing. There has been an increased emphasis on research and a move towards outcomes-based teaching and learning. It seems possible that a current UGC review of higher education (under Sir Colin Lucas) may lead to greater liberalization for the universities in terms of resource allocation rather than the current highly prescribed system. Nevertheless, it has to be stated also that the system can be said to have been successful since five of the eight publicly funded institutions appear in the Times Higher/Quacqarelli-Symonds world top 200 university rankings – more than 60 per cent of the Hong Kong higher education system. The eight universities together with their top 200 rankings where appropriate are shown below:

University of Hong Kong (24)
University of Science and Technology (35)
Chinese University (46)
City University (124)
Polytechnic University (195)
Baptist University
Lingnan University
Institute of Education

Source: THE/QS, 2009.

There are currently two private universities that are self-financed (the Open University and Shue Yan University). The government is now encouraging more 'private universities' to develop. This is because of the policy of expansion announced in the year 2000, when the post-secondary entry rate for the 17 to 21 age cohort stood at some 30 per cent (18 per cent in university places and 12 per cent in overseas supported students and funded higher diplomas). The aim was to expand this to 60 per cent by 2010. This figure was actually achieved by 2005 through the expansion of a community college sector offering Associate Degrees and Higher Diplomas (equivalent to completion of year one of the three-year honours degree or the first two years of a four-year degree). This rapid expansion caught the government somewhat by surprise and it has moved to regulate the sector only in retrospect. Moreover, as stated above, the new policy is now for extra demand for higher education places up to first degree level (caused by the significant growth in associate degree and higher diploma students who wish to progress further) to be met by 'private universities'. This has also mirrored, in some respects, developments in Mainland China where there has been significant expansion of private universities to meet demand as well as expansion of self-financed places by the existing universities (Li and Morgan, 2008). The experience may not be similar to Hong Kong where the private sector, led by universities' continuing education/lifelong learning units, puts an emphasis on quality over quantity and where, in general, there are fewer barriers to low-income students to higher education. Also the provision of higher diploma programmes which are

more vocationally related than associate degrees, appears to prepare students better for entering the workforce than has been the case in the expansion of higher education in Mainland China.

As noted above, the public provision of higher education is via eight funded university institutions under the UGC – five of which are included in the list of the world's top 200 universities. As stated, first degree places are limited and controlled as to subject-specific intake while taught post-graduate places are now 'self-financed' – in practice at a marginal rather than a full-cost fee. A subsidized first degree place attracts a fee of $42,500 (18 per cent of actual full cost), taught masters range around $60,000 to $70,000 while the 'overseas' student higher fee is around $100,000 – still representing less than full cost recovery.

The private or lifelong learning sector

There is a vibrant 'private' sector that has also been termed the 'lifelong learning' sector or the 'fourth estate' (Cribbin, 2008). As noted above, there are currently two private universities, the Open University of Hong Kong and Shue Yan University. The second of these recruits mainly full-time students while the Open University initially concentrated on part-time students, but now admits full-time students also. All the public universities have active, self-financed continuing education units, which offer a wide lifelong learning provision – and this provision is, by government decision, to be self-funded and not in receipt of any public funds. These units have their roots in the extra-mural tradition derived from British practice. The University of Hong Kong's Department of Extra-Mural Studies was established in 1956 and became a School of the University in 1992 (as the University of Hong Kong School of Professional and Continuing Education or HKU SPACE). The initial focus of these units was on providing general interest courses and some professional preparatory and continuing education courses to the community outside the universities, largely on a part-time basis.

By the late 1980s they were able to adapt to meet the growing need for opportunities to study to degree level and for accredited, continuing professional education that arose because of the severe under-provision of degree level opportunities and the upgrading of skills required as the economy moved rapidly from a manufacturing base to a service base in the 1980–2000 period. Degree level opportunities in particular were provided by partnerships with overseas universities (notably from the UK and Australia) as local opportunities were not available and the overseas universities were ready and willing to export programmes, partly because of their own financial pressures caused by cutbacks. The combination of these factors resulted in a significant growth of accredited work in these continuing education units during the 1990s.

In addition, there are a number of 'quasi-public' bodies, such as the Hong Kong Vocational Training Council (HKVTC) and Caritas. The VTC is a government-subsidized operation on a large scale. Established to support the development of skills for the manufacturing industry it has transformed itself to meet the skills

needs of service industries at the basic level. It is heavily subsidized with an extensive range of centres and has been able to expand to provide Higher Diploma opportunities as well as overseas degree articulation opportunities. Caritas is a Roman Catholic organization that provides adult continuing education opportunity from basic to degree level, the latter via overseas partnerships. In addition there is a range of private company provision with some structured as not for profit and some for profit. These also vary from local institutions to subsidiaries of major international commercial education chains and from large to small scale. Examples of local institutions include the Hong Kong Management Association, which operates on a large scale and offers its own and overseas collaborative operations. Yet others are effectively one-man bands offering only a single overseas programme in a niche area. Overseas groups such as Kaplan and the Raffles Group from Singapore are active. The scale of the whole lifelong learning sector is difficult to determine and estimates vary from about half a million enrolments to 1.25 million annually with one estimate of annual spending in the sector being HK$14 billion – more than total public expenditure on higher education (HKU SPACE, 2008).

Another feature to note is that the sector has been lightly regulated hitherto compared with the government funded sector, but this is now changing. The Hong Kong Government feels that it should ensure a level playing field and legislate for comparable standards as between the private sector and the self-funded self-accredited sector (principally the university continuing education units). This has led to some tension, but a number of levers are in place:

1 The Non-Local Higher and Professional Education (Regulation) Ordinance. This is mainly a consumer protection measure and treats private and self accrediting institutions separately though requiring similar reporting; it came into force in 1998.
2 Guidelines for Associate Degrees and Higher Diplomas – applied retrospectively and largely drafted by the lifelong learning sector; the Associate Degree common descriptors were first promulgated in 2001 and the joint Associate Degree/Higher Diploma common descriptors in 2009.
3 The HK Qualification Framework (QF) and Qualifications Register (QR) which is emerging as principal lever. It is administered by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) for the non-self accredited sector and the Joint Quality Review Committee (JQRC, a body set up by the universities) for the self-accredited sector; it came into force in 2008.
4 The Education Ordinance and the Post-Secondary Colleges Ordinance; these are longstanding items of legislation.

The extent of regulation is still emerging but is most focused where government provides support, e.g. through the Continuing Education Fund to students where to be eligible for support courses must now appear on the Qualifications Register or in land grants or loan provisions for campus development. The reality for the

self-funding institutions is that they may need to reach an acceptable accommodation with government on this issue of regulation or risk less palatable measures being introduced later. To put it another way they should 'jump before being pushed'. It remains to be seen what will develop. Government intent to regulate, somewhat belatedly in terms of the very significant development of community colleges, is very clear. The community college sector now comprises some 20 institutions with a full-time student population of about 28,000. This is a significant addition to the opportunities available for post-secondary study and appears to have developed without clear direction from government, albeit with support in terms of land grants and loans for campus development. Government has been criticized for not doing more to ensure recognition of the Associate Degree and Higher Diploma qualifications in their own right rather than as stepping-stones to degree level study. HKU SPACE (2008) statistics show that 70 per cent of associate degree students and 50 per cent of higher diploma students go on to further studies at degree level. The sector, together with the most recent initiative of government to promote private universities is likely to take the brunt of expectations to progress beyond secondary level for diploma holders, post 2012. It is significant that while in that year there will be some 80,000 school leavers it is anticipated that by 2020 this number will have dropped to 50,000. As stated earlier the private sector and the lifelong learning sector will therefore have to expand in the short term and face contraction in the medium term as demand drops significantly due to demographic change. As a more immediate example of how the private sector has to bear the brunt of vagaries in government policy there is an issue in 2011/12 for the private providers where the 3 + 3 + 4 reforms mean that there is no longer a F5 entry cohort to the associate degree/higher diploma programmes. The self-financing providers face a dilemma of how to maintain their capacity, particularly in teaching strength through this year in which student numbers and hence revenue will fall before the impact of the double cohort in 2012/13.

Hong Kong as an education hub: rhetoric or reality?

In my own doctoral research I focused on the provision made by this lifelong learning sector. The first finding to report is that the work of that sector has historically been largely ignored by government and indeed appears to an extent to have operated 'under its radar'. The research also determined that it appears that the extent of import penetration in Hong Kong via overseas degree providers (either with private sector partners or with university continuing education partners) has been underestimated.

Hong Kong has long been an exporter of students and an importer of programmes and in 2004 some 72,000 HK persons over the age of 15 were studying overseas, 5,500 in Mainland China (EMB 2005). In 2008/9 there were some 36,377 higher education students in the USA, Australia, Canada and the UK alone. These figures indicate the extent to which Hong Kong cannot meet its own educational needs. There was a rapid growth of overseas degree programmes offered in Hong Kong

from the late 1980s and the precise scale has been established for 1999 and 2005 in terms of student numbers, providing countries, fees paid and numbers of graduates. The data on this are in Tables 9.2 and 9.3.

In terms of full-time study, post-secondary study opportunity is now available in local institutions to 64 per cent of the 17 to 21 age group cohort but funded degree provision meets the needs of only 18 per cent of this age cohort. Funded sub-degree and overseas study meets a further 12 per cent but these sub-degree places (funded higher diplomas) are being phased out. The remaining 34 per cent is met by the self-financed community college sector in Associate Degree (AD) and Higher Diploma (HD) programmes. This proportion will increase as the funded sub-degree places are phased out. The community college expansion dates only from the year 2000. The increasing number of such graduates means that there is significantly more demand for degree level places. Additional government funded provision was initially only for about 1,000 second year degree places from 2005/6 though this was increased to some 2,000 from 2008/9. There are therefore increasing numbers of full-time, self-financed degree places, offered both by local and overseas providers.

Table 9.2 Programme provisions and overseas students involved in 1999 and 2005

Year	*Programme in total*		*No. of students in overseas programme*		
	Registered	*Exempted*	*Registered*	*Exempted*	*Total*
1999	190	114	18,150	9,852	28,002
2005	310	342	22,723	27,627	49,990

Table 9.3 Numbers of students by country, academic level and year (1999 and 2005)

C	*Country*	*Bachelors*	*Masters*	*Doctorate*	*Others*	*Total*
1999	Australia	5,809	2,730	86	1,813	10,438
	Canada	0	105	0	17	122
	China	478	296	0	14	788
	UK	1,834	9,764	381	3,646	15,625
	USA	315	458	0	183	956
	Other	13	3	0	57	73
	Total	7,633	12,681	467	7,207	28,002
2005	Australia	8,765	4,843	532	3,325	17,465
	Canada	4	119	0	86	209
	China	363	55	38	2,124	2,580
	New Zealand	0	59	0	0	59
	UK	12,890	8,902	415	5,210	27,417
	USA	510	513	0	746	1,769
	Other	199	80	0	212	491
	Total	22,731	14,571	985	11,703	49,990

In general, overseas degree provision (full time and part time) is regulated by the Non-local Professional and Higher Degree Registration Ordinance. All courses have either to be 'registered', if with a private sector partner or 'exempted', if partnered with one of the self-accrediting institutions.

As at late 2006 there were some 1,108 overseas programmes, 411 (37 per cent) are 'registered' and 697 (63 per cent) are 'exempted'. In terms of origins, some 54 per cent are from the UK, 28 per cent from Australia and 7.5 per cent each from the USA and China (Ed.B., 2007). This suggests considerable 'import penetration' and raises doubts about Hong Kong's comparative advantage to export programmes itself. It is instructive to compare the funded provision with the overseas provision (Tables 9.4, 9.5, 9.6 and 9.7).

It appears, therefore, that the Hong Kong government's policy is not well based on knowledge or research into the current situation, as my doctoral research showed in analysing its policy for Hong Kong to be a regional education hub. The contention was that, first, as stated above, the Government appeared to be unaware of the actual situation, given that Hong Kong does not, by a long way, meet its own demand for higher education; therefore it is questionable as to whether it would have capacity to export. Secondly, I showed that the growth of education

Table 9.4 Non-local and UGC provision by year (1999, 2005, headcount)

Year	*Non-local students*	*UGC sector*	*FTE*
1999	28,002	84,538	70,040
2005	49,990	74,760	67,715

Table 9.5 Non-local and UGC provision by year and level of programme (1999, 2005, headcount)

Level	*Non-local (by headcount)*		*UGC (by FTE)*	
	1999	*2005*	*1999*	*2005*
Bachelors	8,449	22,731	45,523	50,009
Masters	13,356	14,571	6,062	3,428
Doctoral	467	985	3,607	5,208
Other	5,430	11,703	14,848	9,070

Table 9.6 Fee comparisons, overseas courses versus UGC levels

Year	*Non-local*	*UGC*
1999	$950 million	$12.623 billion × 18% = $2.77 billion
2005	$2.28 billion	$9.93 billion × 18% = $1.78 billion

Table 9.7 Graduates by level of programme, provision and year (1999, 2005, headcount)

Year	*Level*	*Non-local*	*UGC*
1999	Bachelor	2,459	14,600
	Master	2,407	4,768
	Doctor	5	1,352
	Others	1,456	10,624
	Total	6,327	31,344
2005	Bachelor	7,656	15,719
	Master	3,360	3,553
	Doctor	65	1,745
	Others	4,605	5,741
	Total	15,686	26,758

hubs does need to be supported by government or its agencies. To support the contention that the policy is mere rhetoric, the case was exemplified by analysing the roles of the current major export hubs, Australia and the United Kingdom, and the growth of certain major hub cities in the region such as Singapore or in Malaysia, and even parts of China itself, particularly Beijing and Shanghai. The research therefore looked at this issue as well as the motivations to export education through a questionnaire survey of a number of overseas providers and in-depth interviews with a number of leading education figures with experience in this area.

A subsidiary element of the research was the question of why there appeared to be apparently little involvement by Hong Kong institutions (and indeed overseas institutions) in the Pearl River Delta region of Mainland China. On the face of it, this is somewhat surprising given that Hong Kong is contiguous to the Pearl River Delta and that its industries have moved there encouraged by Hong Kong investment. Nevertheless, there are tensions between Hong Kong and its neighbouring region, with various cities (such as Guangzhou, Shenzhen, Dongguang, Zuhai and Zhongshan) competing with each other to be leaders rather than being willing to collaborate, although there are now signs that this is changing. Historically there have been few leading universities in the region as these are concentrated in Beijing and Shanghai. A recent report by the Bauhinia Foundation Research Centre calls for enhanced 'Hong Kong–Shenzhen Education Cooperation' in order to realize the potential for cross-border links at both secondary and tertiary levels (Bauhinia Foundation, 2009). Shenzhen has grown rapidly since the 1980s from a fishing village to a metropolis of some 10 million people. In fact, there have been recent moves in connection with the Pearl River Delta, in that the Hong Kong universities have been actively encouraged by government to establish links, in particular in an area of the Hong Kong/Shenzhen border that has been designated as a 'university city'. Almost all the Hong Kong tertiary institutions have expressed interest and there has already been some development of research centres with more to come. In addition, in response to the financial crisis, the

Hong Kong government has targeted six areas or 'pillar industries' that are seen as strategic for development in terms of links with Mainland China and the Pearl River Delta. Education is one of these six areas. As yet, however, concrete plans for realizing this vision are as chimerical as those for the education hub.

Conclusion

In 2009 the Chief Executive, Donald Tsang, announced that economic areas where Hong Kong enjoys clear advantages will be explored to realize their potential in full while the Task Force on Economy's Challenges (TFEC) will study how to further develop the following six economic areas, including educational services as noted below:

> Hong Kong provides a bi-literate and tri-lingual environment as well as an internationally recognized curriculum. Together with the heavy investment in tertiary education, research funding and academic facilities on a par with international standards, and the keen demand for local tertiary education by Mainland students, there is ample room for the development of the education industry in Hong Kong. The Chief Executive noted that with the change in the global economic environment and the increased integration with the Mainland, there is a need to ascertain whether these economic areas would present new opportunities and what the Government could do to help them take off.
>
> Hong Kong Government, 2009

Thus, there may be further change to come in the education sector if 'educational services' are to develop on any scale as an economic activity. This also relates to the 'education hub' concept, which seems more rhetoric than reality. For a recent assessment of the potential there is a recent report by a research group at the Hong Kong Institute of Education (Cheng *et al.*, 2009). This calls for government to be proactive and to build on existing structures and capacities. It calls for government to designate an agency to take the lead in promoting the advantages of Hong Kong for higher education demand from overseas. Despite the high international rankings referred to earlier it seems that Hong Kong higher education is not at all well known in the rest of Asia. The report, however, does not recognize in any detail the role of and capacity of the lifelong learning sector described in this chapter. It also points to Hong Kong's relatively low expenditure on research compared with developed countries and with Singapore.

However, in one area the policy has been a success, this is in funded higher education. The Hong Kong University Grants Committee in a 1996 review recommended that overseas student numbers should increase from a then very low base. This was about 2 per cent of total funded places. Following further encouragement in a 2002 review this figure is now around 10 per cent of which the majority comes from Mainland China. The policy aim is now to reach 20 per cent, but this would still be a modest number of overseas students in Hong Kong in comparison

with other world cities – partly because its home-funded university numbers are relatively low. The private sector may be able to increase this but has hitherto not had the opportunity to do so. A further UGC review is now in progress and may make relevant recommendations as it appears to be considering the whole sector and not just the publicly funded part (UGC, 1996, 2002, 2004, 2009).

Taking a Hong Kong context leads to another consideration that the notion of "hub cities" may be a more fruitful model to explore in the analysis of education hub activities and this has been suggested by a Royal Melbourne Institute of Technology group to develop its 'global education city' concept to include such cities as London, Melbourne, Sydney, Beijing, Shanghai, Hong Kong, Singapore, San Francisco, Boston, New York etc. (Gardner. 2006). In this context the RMIT group scores Hong Kong quite highly, though in numbers of institutions and numbers of overseas students it still ranks quite low. For example, Boston is said to have over 200 HE institutions, and cities such as Beijing have over 100,000 overseas students. Hong Kong's eight public institutions had 8,392 overseas students in 2008/9.

The conclusion is that the government policy is indeed rhetoric rather than reality and that if progress is to be achieved for Hong Kong as an education hub then some formal direction or intervention is necessary in order to achieve this. In some ways the policy was generated by a UGC review to promote more international students in the Hong Kong universities. As we have seen this has been quietly successful with some modest government help and the numbers have expanded from 2 per cent of the total to well over 10 per cent and are heading towards the target of 20 per cent of numbers, the bulk of which are self-financed. Even so this is a relatively small number given the size of the funded university sector (it implies some 12,000 overseas students at maximum) and in comparison with overseas student numbers in the major hub countries, including China. In fact China is catching up fast as a major player in this area in terms of attracting students. In a recent report it was characterized as a "middle power" in terms of positioning in the international student market with some 223,500 overseas students in 2008 (Lisanowski, 2009). In some ways there are also signs that China may become an exporter of education for example through the network of Confucius Institutes offering Chinese language and culture programmes. It is reported that 40 million people are now learning Chinese in 3,000 higher education institutions in 109 countries (Lisanowski, 2009). It is therefore an interesting field of development but one in which Hong Kong is likely to be able to play a niche role rather than become a major player.

References

Basic Law (2009), Online at http://www.info.gov.hk/basiclaw/facts/index.html (accessed 16 July 2009).

Bauhinia Foundation (2009), Web report on deepening cross boundary education cooperation. Online at http://www.bauhinia.org/publications/.

Cheng, Y.C. (2009), 'Hong Kong Educational Reforms in the Last Decade: reform syndrome and new developments', *International Journal of Educational Management*, 23: 65–86.

Cheng, Y.C., Ng S.W., Cheung, C.K., and Choi, P.L. (2009), 'A technical research report on the development of Hong Kong as a regional education hub', HKIED Internal Report. (Hong Kong, HKIED).

Cribbin, J.A. (2008), 'The lifelong learning sector and the development of Hong Kong as a regional education hub: is government policy rhetoric or reality?' Unpublished EdD Thesis, University of Nottingham.

Economist (2009), 'Economic Freedom', *Economist*, 19 September.

Ed.B. (2007), 'Statistical information, Non-local courses Registry'. Online at http://www.edb.gov.hk/index.aspx?langno=1&nodeid=1250 (accessed December 2007).

Education Commission (2000), 'Learning for life, learning through life: final report of the education commission', September, Government Printer, Hong Kong.

EMB (2005), 'Expansion in post-secondary opportunities.' Online at http://www.emb.gov.hk/index.aspx?langno=1&nodeid=1355 (accessed 28 April 2005).

Gardner, M. (2006), 'Launch of committee for Melbourne higher education taskforce white paper and global universities cities index'. Online at http://www.rmit.edu.au/browse;ID=1c8c7ugp2fby;STATUS=A?QRY=global per cent20university per centcity per cent20index&STYPE-ENTIRE (accessed 21 March 2008).

HKU SPACE (2008), 'Survey on the demand for continuing education in Hong Kong 2007/2008, comparison and analysis', Centre for Research in Continuing Education and Lifelong Learning, HKU SPACE, HKU.

Hong Kong (2007), *Government Annual Report*: Hong Kong 2007. A special 10th anniversary report, Hong Kong Government Printer, Hong Kong.

Hong Kong Examinations Authority. Online at http://www.hkea.org.hk/en/IR.

Hong Kong Government (2009), 'Press release on economic areas with high potential issued', 3 April. Online at http://news.gov.hk.

Li, F. and Morgan, W. J. (2008), 'Private higher education in China: access to quality higher education and the acquisition of labour market qualifications by low-income students', *Education, Knowledge and Economy*, 2:1, 27–37.

Lisanowski V. (2009), *International Student Mobility: Status Report*, 2009. The Observatory or Borderless Higher Education, London. Online at http://www.obhe.ac.uk.

Olsen A. and Burges, P. (2007), 'Ten years on: satisfying Hong Kong's demand for higher education', Report by Strategy Policy and Research in Education in Hong Kong. Online at http://www.spre.com.hk.

South China Morning Post (SCMP) (2008), 'Drop in secondary school entries reflects sharp decline in both rate', 8 July.

Times Higher Education/Quacqarelli Symonds (THE/QS) (2009), 'Top 200 World Universities', October 2009. *Times Higher Education*.

Universities Grants Commission (1996), 'Higher Education in Hong Kong', Hong Kong: UGC.

Universities Grants Commission (2002), 'Higher Education in Hong Kong', Report of the UGC, March 2002 (the Sutherland Report), Hong Kong: UGC.

Universities Grants Commission (2004), 'Hong Kong Higher Education: To make a difference, to move with the times', Hong Kong: UGC.

Universities Grants Commission (UGC) (2009), 'Higher Education Review Group.' Online at http://www.ugc.edu.hk/eng/ugc/about/committee/herg.htm.

10 Brain power stored overseas?

An Australian case study of the Chinese knowledge *diaspora*

Rui Yang

Introduction

Globalization is a powerful transformative force that has brought more or less all countries in the world into its global system. It accelerates cross-border mobility of people, capital and knowledge. The flows are guided by the market value and 'global profitability' (Burbules and Torres, 2000: 9), and influenced by the international hierarchy and power relations. In higher education, the global flows between different nations and institutions are sometimes asymmetrically two-way, sometimes unidirectional (Marginson, 2006). The long-standing issue of brain drain, especially from poorer countries to the leading institutions in the wealthiest nations, certifies that the flow is primarily steered by the economic strength and the capacity of educational and scientific systems.

There exists a powerful yet unequal international knowledge system (Altbach, 1998), featured by the disparity between North and South. Within its structure, a few countries are the centre retaining extraordinary academic power, while the rest form the periphery and the semi-periphery. The lack of well-trained academic personnel is a major factor for the peripheral countries failing to move closer to the centre. The system reveals the stratified nature among societies, which underlines the fact that flows of intellectuals are still very largely from the South to the North. The existing global inequality of knowledge creation and application is being exacerbated, as wealthy countries of the global North compete to attract research talents from poorer countries of the South (Solimano, 2002), whose best and brightest then consolidate the already-strong knowledge base in the former (Hugo, 2002), at the cost of the latter.

Within such a context, the net flow of the highly skilled has been strongly biased in one direction from developing to developed countries (Grubel, 1987). The patterns of the flows are viewed differently by 'internationalist' and 'nationalist' models. Focusing on the fact that the mobility of the highly skilled raises the total world output, the 'internationalist' perspective is not concerned about where the human capital is located, as long as it can flow freely. When human capital flows from regions of low productivity to regions of high productivity, resources will be allocated rationally worldwide, maximizing world output and benefiting the world as a whole (Johnson, 1968). In contrast, the 'nationalist' perspective

insists that as an indispensable resource for national development the international mobility of human capital results in a loss of technological development and economic growth for sending countries (Partinkin, 1968; Mullan *et al.*, 1995; Dzvimbo, 2003).

Nevertheless, the non-unilateral, complex, overlapping and unpredictable characteristics of globalization indicate that the distribution of power is fluid and changing. People who are influenced by globalization could have both positive and negative impacts on the process, depending on their recognition of globalization in what respects and on whose terms (Burbules and Torres, 2000). The flows of the highly educated form an increasingly important part of the global knowledge system. Their worldwide circulation could not only consolidate host countries' research hegemony, but also modify global asymmetries and unidirectional transformations (Marginson, 2006). The hierarchical structure in knowledge distribution and dissemination has become less fixed, as the *loci* of power and growth are becoming multiple, and more dispersed (Meyer *et al.*, 2001). The *diaspora* option can be instrumental in narrowing the North-South scientific gap (Meyer and Brown, 1999).

The global mobility of the highly skilled remains a matter of national concern and raises welfare and economic development issues (Bhagwati and Rodriguez, 1976; Grubel, 1987; Lucas, 2001; Auriol and Sexton, 2002; Olesen, 2002). Meanwhile, there are new interpretations of the phenomenon. Recent literature has drawn attention to some of the potential benefits of technology transfer, trade and capital flows induced by 'brain drain' (Gaillard and Gaillard, 1998; Saxenian, 2002, 2006; Solimano and Pollack, 2004). The term 'brain exchange' implies 'a two-way flow expertise between a sending country and a receiving country' (Salt, 1997: 5). The new concept of 'brain circulation' refers to the flow of expertise between sending and receiving countries in a way that mutually benefits both sides (Mahroum, 1999).

As receiving countries enjoy many net positive effects of the mobility including the stimulation of an innovation capacity, an increase in the stock of available human capital and the international dissemination of knowledge (Solimano and Pollack, 2004), for sending countries, the return of migrants and the development of networks are beneficial in the long term, although the loss of human capital has a negative effect in the short term (OECD, 2002). The returning highly skilled workers bring development and technology transfer to their home countries (Kapur, 2001; Lucas, 2001). Choi (1995a) points out the crucial contribution of repatriates in the development of Korea's semi-conductor industry. Johnson (2002) argues that the Taiwanese economic growth in the late 1980s was fuelled by returned scientists and engineers. These studies show that repatriated scholars do not completely isolate themselves from their former colleagues abroad. Rather, they are likely to strengthen scientific ties with those scholars to keep up with the latest developments in their fields (Choi, 1995b).

While still coping with brain drain, sending countries now increasingly recognize *diaspora* as a channel for technology transfer. With a strong attachment to their homelands, the *diaspora* can create networks to connect professionals and

scientists around the world to help promote scientific and economic development in their home countries (Solimano, 2002). For instance, grassroots initiatives in South Africa and Latin America developed to link researchers abroad to networks in their home countries. Indian professionals in the United States have been the primary driving force in the transfer of knowledge to India (Cervantes and Guellec, 2002; Saxenian, 2006). The global network of Korean scientists and engineers strengthens Korea's links with the host countries for highly skilled Korean scientists and scholars (Namgung, 2009). Without permanent repatriation, the knowledge *diaspora* transfer expertise and skills to their countries of origin and strengthen the connection between their host and home countries.

The language of *diaspora* not only advocates the importance of homeland, but also entails fluidity, transnationality and economic-driven characteristics that emphasize the equal importance of the host country and the social transactions between the home country and the host country. The term goes beyond the restriction of narrow and simple identification of persons by traditional ways, which usually refer to nation-state to define people's self-recognition (Wong, 2006). Based on the geographic origins and socio-economic features of *diaspora*, this chapter defines its research subjects as the Chinese knowledge *diaspora*. The addition of the word 'knowledge' indicates that these *diaspora* not only have been highly educated with at least an undergraduate degree from Mainland China before they went overseas, but also are employed currently as knowledge workers and agents of knowledge transfer at university level.

The word *diaspora* originated from the Greek verb *diasperein*, meaning to sow or scatter about, and the Greek preposition *dia* means through or over. The ancient Greeks used it to describe the colonization of Asia Minor and the Mediterranean in the Archaic period (800–600 BC) (Reis, 2004). *diaspora* was later used to denote the dispersion of Jews outside of Israel from the sixth century BC, when the Jews were exiled to Babylonia. The word thus connotes the loss of homeland, up-rootedness, expulsion, oppression, moral degradation, a collective memory of the homeland and a strong desire to return to it one day. It has now widened to include political refugees, guest workers, alien residents, expellees and overseas communities (Shuval, 2000: 42).

In comparison with other types of migration, a *diaspora* is a system of personal networks, shared culture and language, and an imaginary relationship to the homeland (Anderson, 1991: 5–7; Kapur, 2001: 5). While maintaining an identity and connection to the home country, it is a means of channelling the economic resources of the overseas *diaspora* to encourage investment and entrepreneurial activity in the homeland (Reis, 2004). For example, remittances accounted for 9.6 per cent of the GDP in the Philippines in 2002 (Chalamwong, 2004: 21), and 67.5 per cent of China's accumulated foreign direct investment came from the Chinese residents of Hong Kong, Macau and Taiwan in China from 1987 to 1995 (Lucas, 2001: 25).

With intensified globalization, the elements such as the loss of homeland, a collective memory of oppression and the gnawing desire for return have been suppressed, while other connotations such as super-mobility and flexible identi-

ties on the part of trans-migrants as well as multiculturalism and transnational flows of capital have been elevated. They now maintain multiple relations – familial, economic, social, organizational, religious, and political – that cross borders (Ma and Cartier, 2003). The role of the *diaspora* could be politically significant as well. Shain and Barth (2003) identify *diaspora*s as active forces, pointing out their influence on foreign policies in both the host countries and the home countries. *Diaspora*s often organize interest groups to influence the foreign policies of their host countries vis-à-vis their home countries since they may achieve economic and political power, while also forming a source of recruits and funding.

The knowledge *diaspora*, therefore, is not a new phenomenon. Global knowledge *diasporas*, however, are a newer phenomenon sustained by both increases in global migration flows, and by the rise and increasing ubiquity and density of information and communication technologies (Welch and Zhang, 2007). As a transnational human capital in this new millennium, they become more valuable in a context of fast-increasing geographical mobility and worldwide communication linked to globalization (Zweig *et al.*, 2004). There is an urgent need to examine the contributions they make to both their home country and the host country and what factors that influence their knowledge work.

Universities provide cross-border educational services and embed themselves deeply in cross-border flows of knowledge workers. The new global cultural economy is a complex, overlapping, disjunctive order (Appadurai, 2001), with flows of cultures hardly bounded within nation-states, but moving across national boundaries to the global. Within these processes, trans-nationalism emerges amongst *diaspora* networks of ethnically and culturally distinctive peoples. The knowledge *diaspora* is able to interrogate the global through the local. They contribute to the creation of 'in-between' cultural spaces above the boundary of nation-states (Rizvi, 2000). The university, as a trans-national platform from which knowledge *diasporas* work, is an essential organization that creates, transmits, reproduces and receives cultural messages or practices to support the mobility and deployment of cultural power and influence. While rooted in their own cultures and affected by national realities, the university is part of an international knowledge system and interacts with institutions and ideas from abroad.

Highly educated and mobile talent is a valuable human capital and a priority target for national policies. This is because the increase in the stock of brain power sustains and increases national economic competency in the knowledge-based economies (Kuptsch and Pang, 2006). For example, the Chinese knowledge *diaspora* in Australian universities is an important asset to both Australia and China. Due to its isolated geographical location, its historical reliance on Britain as a colonial nation and its relatively small population, Australia is peripheral in the global economy (Hugo, 2006), and needs to place a stronger emphasis on its relationship with its Asian neighbours. China is potentially a strong counterpart or partner that could provide extraordinary opportunities for Australia (Sutter, 2005). Australia's Chinese knowledge *diaspora* could be useful and direct human capital for this purpose. However, there has been little research on

it, especially in local contexts and in relation to broader axes of spatial relations in state and society (Cartier, 2003).

For China, however, deploying the *diaspora* option is now a priority, representing a more nuanced response to issues of brain drain (Zweig, 2006). Between 1978 and 2006, 1,076,000 Chinese students travelled abroad for study purposes. Of these, only 275,000 have as yet returned. While the latest return rate has increased as more opportunities open up in a dynamic China, the very best and brightest still remain abroad (Cao, 2004). They should be seen as a key potential resource, rather than as an instance of brain drain. Similar to the role played by the Chinese business *diaspora* in effectively boosting China's economy during its dramatic development since 1978, the Chinese knowledge *diaspora*, as a key and under-exploited resource in a context of globalization and a modern knowledge-based economy, is expected to play a vital role in China's next stage of development. Moreover, it will accelerate the integration of the Chinese academy into the international knowledge system.

By situating the Chinese knowledge *diaspora* in a specific local context to investigate their living and working experience, this chapter aims to reveal how globalization has shaped the nature of Chinese knowledge *diaspora* and their academic contributions to Australia, China and globally, and how these knowledge *diaspora* as the subjects of globalization have exerted their subjective initiatives to respond to and further reshape globalization. The issues and frustrations confronted by them will be enlightening for a further understanding of the more general situation of the global Chinese knowledge *diaspora*.

Problems of methodology

In social science, reality comes to be understood by human beings only in the form in which it is perceived (Bogdan and Biklen, 2003). All knowledge is socially constructed. Human social life is the aggregate reflection of people's ideas, beliefs, and perceptions that people hold about reality, which are continuously constructed, created, tested, reinforced, and developed by people through their social interaction and response. Research findings are the outcomes produced along with the process by which the investigation proceeds. In order to understand the cultural practice and the meanings assigned to our research subjects, the best way is through their own eyes to open up a range of possible subjects of inquiry (Neuman, 2004). The qualitative inquiry allows both our research subjects and me – the researcher – to access the thick descriptions of social life, detailed explanations of social processes, and the generation of theory on both micro and macro levels of analysis (Hesse-Biber and Leavy, 2004).

In the research reported here, a case study approach was chosen, first because it allowed an in-depth understanding of the situations and meanings for those involved (Hancock and Algozzine, 2006), locating the target group in its social environment. Secondly, case studies are featured as phenomenon-oriented rather than as method-oriented, providing the flexibility of using various methods and inquiry at different levels to examine the case. A case study approach could open

the way to move towards both meta-and micro-level investigations, and provide the means for more holistic multidimensional analyses. While this case study is not to develop generalizations, but to seek the particular more than the ordinary (Stake, 2005) to understand the case better, it is still hoped that the analysis of this case sheds light on the general scenario of the Chinese knowledge *diaspora* elsewhere in the world.

There were particular reasons for the choice of Monash University. First, a substantial number of Monash academic staff members are originally from China and have been working at the university for more than eight years. Secondly, as an academic member of Monash University myself at the time of the research, it was relatively easy and convenient to access the participants. Thirdly, Monash University is a member of Australia's elite 'Group of Eight'[1] and highly internationalized. It has been open to international influences to a greater extent than most Australian universities (Marginson, 2000). Its development synchronizes with the intensification of globalization, reflecting the complicated and multi-level influences that globalization has on higher education.

The sampling started with a provisional list of Monash University's mainland Chinese academic staff made after sending an email to invite their expression of interest in participating in the research, in which I set out the eligibility criteria: that the participants must be originally from China's mainland, usually with an undergraduate degree from there, and with a minimum of eight years of living overseas. Based on various variables, including disciplines, professional ranks, gender and age groups, in order to guarantee less biased and more representative views and perspectives, 15 academics were selected for interviews, as shown in Table 10.1.

The data were collected through semi-structured interviews which allowed me to enter into the interviewees' 'inner perspectives' (Patton 2002), and provided me with opportunities to make sense of what they reflected on, in relation to their feelings, thoughts, intentions and behaviours that had taken place at some previous point in time. It also allowed me to observe, in addition to asking and listening, to encourage my interviewees to fully express their understanding, and to better understand their viewpoints by looking at their actions and facial expressions.

Fifteen interviews were conducted and, except for one, all were tape-recorded. As to the one that was not tape-recorded, I asked for permission to take notes. The length of the interviews was flexible depending on the extent of exploration the interviewee engaged in, with an average of 50 minutes. All interviews were conducted in Chinese Mandarin. The use of the mother tongue could eliminate misunderstandings to the greatest extent and deepen the comprehension of issues, because language is more than a means of communication about reality. Indeed, it is a tool for constructing reality (Spradley, 1979).

After conducting interviews, the tape-recorded individual interviews and notes were transcribed and categorized according to the research questions. The draft 'analytical categories' with detailed descriptions formed the basis for coding. Grounded theory was applied. Based on the 'material' (Schmidt, 2000), the concepts and themes and how they were linked to each other and to the existent knowledge were identified successively.

Table 10.1 List of interviewees

Code	*Gender*	*Age*	*Discipline*	*Academic rank*	*Highest degree, origin*	*Stay in Australia*	*Immigration status*
M1	F	35–40	Economics	Senior Lecturer	PhD, Australia	11 years	Australian citizen
M2	M	35–40	Economics	Senior Lecturer	PhD, Australia	9 years	Australian citizen
M3	M	41–45	Engineering	Professor, with senior administrative roles	PhD, Australia	18 years	Australian citizen
M4	M	42–45	IT	Associate Professor, with senior administrative roles	PhD, UK	12 years	Australian citizen
M5	F	41–45	Accounting	Senior Lecturer	PhD, Australia	17 years	Australian citizen
M6	M	41–45	Engineering	Senior Research Fellow	PhD, UK	9 years	Australian citizen
M7	M	41–45	IT	Lecturer	PhD, Australia	8 years	Australian permanent resident
M8	M	41–45	Social Sciences	Senior Lecturer	PhD, UK	15 years	Australian citizen
M9	F	41–45	Business and Economics	Associate Professor	PhD, Australia	15 years	Australian citizen
M10	M	46–50	Health Sciences	Associate Professor	PhD, Australia	19 years	Australian citizen
M11	M	46–50	Health Sciences	Associate Professor	PhD, France	14 years	Australian citizen
M12	M	51–55	Engineering	Professor, with senior administrative roles	PhD, UK	15 years	Australian citizen
M13	M	51–55	Humanities	Senior Lecturer	PhD, Australia	20 years	Australian citizen
M14	F	56–60	Management	Associate Professor, with senior administrative roles	PhD, Australia	17 years	Australian citizen
M15	M	56–60	Finance	Lecturer	PhD, Australia	17 years	Australian citizen

In consideration of the unique features of the Chinese knowledge *diaspora* and based on the data I collected from the interviews, I present the following findings.

Self-identity

In terms of how the members of the Chinese knowledge *diaspora* identify themselves, and how their self-identity affects their life and work at Monash University and their international collaboration especially with China, there is a clear agreement that mainland Chinese is part of their self-identity. The degree of such recognition varies for a number of reasons such as the time spent in China and Australia, family and children, to the intensity of connecting with China. Most of the characteristics of *diasporas* such as dispersion, super-mobility and memories of the homeland were mentioned by the participants, while political exile was strongly rejected almost without exception.

As to how the Mainland Chinese knowledge *diaspora* settle in Australia and whether or not they feel alienated, all participants felt cultural integration was the most difficult for them. None thought they had been fully integrated into mainstream Australian society, although they felt comfortable and confident at work. According to M7, full integration was impossible. M15 noted his son's experience and estimated the possibility of integration for the third generation. One participant insisted that he would never be integrated into the mainstream Australian society. While two participants questioned the term 'Australian mainstream society', most of them admitted that they were partially integrated. Although sometimes they complained about their work and life in Australia, they were largely happy and comfortable with their current situation, and did not think the issue of integration was significant enough to affect their living and working.

Australia's multicultural social environment provides the participants with positive possibilities for their career development and well-being. The diverse ethnic communities moderate the hegemonic Anglo-Australian impression in people's minds. They are part of the expanding Chinese population in Australia, although they do not necessarily feel they have been fully integrated into the mainstream society. Some view their scholar's social status as a sign of being part of the mainstream, as mentioned by M15. Meanwhile, as modern professionals with sufficient English competency, they are networking with both Chinese and non-Chinese. As expressed by M4, 'I did not pay attention to this issue because I have both Chinese and non-Chinese friends'.

The responses from the Monash Chinese knowledge *diaspora* challenges the notion that migrants from China are not able to embrace an alternative environment, due to their lack of genuine interest in Australia and the totalitarian Chinese society (Gilbert *et al.*, 2000). The feeling of alienation in the host country was not particularly significant among the participants. In contrast, after living and working overseas for years, with knowledge acquired from both Chinese and Western societies, they have created ways to enact individualism and to combine Chinese spiritual tradition with secular Western knowledge (Wang 2001), and to

have become a modern kind of cosmopolitan literati with a great deal to offer to Australia, China and the world.

Influences of Chinese background

Except for one participant who had only his first year of tertiary education in China before going overseas, the others all completed their undergraduate education in China. Several went overseas after obtaining their Master's degree. Most saw both advantages and disadvantages in their Chinese educational background. While two participants considered their Chinese education background as a disadvantage, and thought it might have contributed to their relatively low academic rank at Monash, the majority viewed their educational background in China as beneficial to their work. Some even insisted that the experience helped them with their job acquisition and professional development. As M5 commented, her Chinese background placed her in a winning position when she competed with others for her post at Monash. M13 detailed how his Chinese connections helped him to build up in-country programmes with China, which brought both financial and social benefits to his department. Five participants (M2, M12, M10, M8 and M11) acknowledged implicitly the contribution of their previous learning and working experience in China to their innovative thinking, a marked contrast to the stereotypical view of Chinese education as based on rote learning (Ballard and Clanchy, 1984; Barker *et al.*, 1991; Marton et al., 1996; Pratt et al., 1999).

China's recent development brings benefits to them, especially those in the fields of economics and management. As M1 explained, the advancement of the Chinese economy has made many China-related economic issues more interesting and relevant to the international community. M3 noted the increasing attention paid by Monash University to developing collaborative programmes with China because of China's development. With the number of international students from a Chinese cultural background fast increasing at Monash, some participants mentioned that they were better placed to communicate with such students than their colleagues from non-Chinese backgrounds.

It is interesting to note that traditional Chinese virtues such as having persistence in the face of adversity and striving for a *juste-milieu* are regarded as a double-edged sword: while being hardworking and bearing tough times motivated them to achieve academic success, they contradicted mainstream Australian values, such as enjoying life and projecting oneself, and even restricted their personal development.

There are some other perceived disadvantages, including weak English proficiency, inadequate knowledge of local culture and customs, and difficulties in networking in the international Western-dominated academic community. The lack of English proficiency was mentioned by every interviewee. As the native language of the two modern hegemonic powers (the USA and the UK in terms of universities), English dominates the global academy. Compared with native English speakers, the Chinese knowledge *diaspora* often struggle with the language and its related culture, although the threat is much less for those in hard sciences.

Research collaboration with China

Previous studies have shown that cultural and linguistic backgrounds contribute to closer scholarly communications. Among intellectual *diasporas*, there is a strong willingness to cooperate with the home country (Meyer *et al.*, 2001). Choi (1995a) also observes that many Asian background academics in American higher education keep close contact with their countries of origin, maintaining scientific and academic relationships with colleagues and institutions at home. Considering their Chinese background and their social and academic networks in China, a general assumption is that the Chinese knowledge *diaspora* would work particularly well in their research collaboration with China.

This research, however, has found that although all the participants expressed their interest in research collaboration with China and have maintained contacts with their friends, family and colleagues there, real collaboration in research and teaching has been limited: among the 15 interviewees, four had no concrete research collaboration, eight had less than half of their collaborative research projects with China, and three had formal and concrete collaborative research programmes with China. The intensity, frequency, consistency and effectiveness of collaborations with China were not significant. The establishment of research collaboration with China requires more than passion. Indeed, it was affected by various factors at multiple levels, which are often out of their control.

The three participants with substantial research collaborations with China shared some common features: a clear awareness of the importance and benefit of such collaborations, their love for China, and their eagerness to contribute to its development. For example for M11's first collaboration with his *alma mater* (solely driven by his passion for China), he has won a project funded by the prestigious Chinese Natural Science Foundation (CNSF), and has snowballed his collaboration. M12's story is similar, and he is happy with his achievements: 'The outcomes after five-year "incubation" were fruitful and beyond my expectation. Since then, my research collaboration with China has been well developed.' Although M8 has been employed only by Monash University, he has started collaboration with a Chinese university to compile a textbook for Chinese undergraduate students, with an application for a CNSF project high on his agenda.

Previous academic networks in China have an effective role to play in stimulating research collaborations, especially since the 1990s when China started to accelerate the integration of its scholarly circle into the international community. The Chinese intellectual *diaspora* is an ideal agent for liaison between Chinese and Western academic communities, and has assisted scholars from Mainland China in entering the global knowledge system through joint projects and publications in international mainstream journals. This was repeatedly confirmed by a number of participants generally, and by M6 in particular. Such knowledge bridges are in part responsible for China's rapidly rising scientific stature (Li, 2005).

As more and more Chinese students go to Australia to read for higher degrees, the *diaspora* is able to extend collaboration beyond their own former teachers and fellow students in China to returned students they have themselves supervised

overseas. M8, for example, works with his former students who returned to China and have since become established scholars there. Their collaborations have been strongly supported by M8's former schoolmates, who are now senior university administrators. As illustrated by M4 using his own experience as an example: 'We have good students from China. Many of them have returned. Some are in positions of influence now. I have projects with them, often also teamed with my old contacts in China. We are achieving high goals.'

Some participants began their collaborative research as the result of the internationalization of their faculties and/or the university. For instance, M5 has a few China-related research projects that are parts of a much larger project of her faculty. M1 also benefited from the existing scholar exchange programme at her faculty and has been working collaboratively with visiting scholars from China. The stories of these participants confirm Monash University's commitment to internationalization, and illustrate that the *diaspora*, as part of the globalization of higher education, could be an agent creating new and different forms of international education in which both they and their university benefit from each other in such activities.

The picture, however, is not always a rosy one. While every participant expressed interest in conducting collaborative research with China, a number of factors restricted its fulfilment. The most prominent is financial difficulty on both sides, as illustrated by M13. Other restrictive factors include heavy workload, excessive accountability, and divergent research priorities in the two countries that have made some participants flinch from developing research collaborations with China. Both M2 and M7 did not want to add anything more to their workload. Some respondents such as M10 and M13, although aware of Monash's emphasis on collaboration with China, felt that Monash did not regard them highly as a reliable agent or strength in the promotion of internationalization.

Differences between Chinese and other partners

Interestingly, the Chinese knowledge *diaspora* collaborates more with scholars from other countries than with those from China. In practice, their partners are more likely to be from Western and a few well-developed Asian countries such as Japan and Singapore. A number of reasons were given, all of which related to the differences between collaborating with Chinese and other partners. Generally, the Chinese *diaspora* communicates and collaborates with Chinese and other partners in the same way. The difference lies in the emotional aspect of the knowledge *diaspora*, who often feel closer to other Chinese scholars. Their collaborations thus include cultural elements. Much collaboration is deeply rooted in personal relationships.

However, the participants suggested that such friendships (*guanxi*) could also be developed through long-standing collaboration with scholars from non-Chinese cultures. M2, for example, pointed out that *guanxi* was important almost everywhere, and scholars from other societies emphasized *guanxi* as well. M8 agreed, and went further by saying: 'Westerners also considered *guanxi* a lot, but

their *guanxi* is different. Chinese *guanxi* emphasizes self-interest. In order to build up *guanxi* in China, you need to deliver benefits or gifts. In contrast, building up *guanxi* and mutual trust with Westerners is often through collaborative work and common research interests.'

Another common difficulty in their collaboration with China was the lack of funding and the unavailability of important research data. M3, M6 and M10 all felt that it was much easier to gain funding from industrialized Western countries. The participants, from a variety of disciplines at all academic ranks, reported that insufficient funding from the Chinese side was a common issue that had affected their collaboration with China, particularly in the areas of medicine, IT, engineering and health sciences. Although some, such as M8 and M6, acknowledged their willingness to contribute to China unconditionally, others including M4 and M12 stressed mutual benefits as the most important factor for their collaborations.

Most participants highlighted the fact that their Chinese partners emphasized personal gains too much as the reason why the collaboration in basic research has been so limited. M3 recalled his experience of collaboration and remarked: 'We must invest money and let them (Chinese collaborators) see the benefits. The tendency of earning money is becoming stronger and stronger. Everything is for money.'

Apart from funding, some participants reported their difficulties in obtaining data from China. This is a particularly serious problem for those in the social sciences. M9, whose discipline is economics, said she could not conduct any China-related research without sufficient data support and very often the required data are not released publicly in China.

The quality of their Chinese partners is another important factor that affects their collaboration. Most of the participants reported on the poor quality of their Chinese partners. The most frequently mentioned limitations included insufficient English proficiency, poor research training, limited knowledge of the international literature, and lack of familiarity with international practice in the scholarly community, especially commonly accepted codes of conduct.

Related to the lack of international practice is a striking shortage of genuine motivation for research among Chinese academics. M9 mentioned that she was invited a year ago by a top Chinese university to lecture there for three weeks. According to her: '… the professors especially the established ones were not interested in research at all, they were so busy with participating in profit-making activities'. Such an observation agrees with the findings of other studies (Yang 2005).

Despite all the difficulties, it remains a common understanding among all the participants that collaboration with China is not only what they want, but also what they need. As M2 acknowledged, collaborating with China had broadened his perspective. Indeed, they have all benefited from this, as knowledge workers in Australia. The collaboration is not only emotionally necessary, but also politically and economically valuable, as there appears to be an international competition for Western universities to work with China. Several interviewees expressed that they had found it increasingly hard to conduct research collaborations with

China. As M5 said: 'In the early 1990s, any overseas scholars were welcomed unconditionally. Now, China's standards for choosing overseas partners have become higher and higher.'

Conclusion

The global circulation of knowledge currents, including among *diaspora* communities, challenges long-standing notions of space and place (Tsolidis, 2001). Dispersed intellectuals and the transnational networks they establish, as part of the wider phenomenon of increased global mobility, and the greater density and diffusion of information technology could tilt the balance towards countries such as China and create far more complex and decentralized, two-way flows of knowledge. The exodus of the highly skilled could be both a loss and a potential gain for the country of origin (Lowell and Gerova, 2006; Wickramasekara, 2002).

My examination of the Chinese knowledge *diaspora* and their research collaborations in a context of globalization, in the specific setting of Monash University, shows that they have in general played different roles. While they are just like other Monash academic staff members in shouldering their daily teaching and research responsibilities, they are often initiators of and active participants in Monash's internationalization programmes with China. They continue to disseminate Chinese culture on all possible occasions, and yet adjust themselves to integrate different cultures and values into their own teaching and research.

The Chinese knowledge *diaspora* does not act as an organized group with specific objectives. Rather, they are a set of individuals of common background and similar aims. Individually, they have never stopped contributing to China's development in various forms and shapes. Originally from Mainland China, with posts in a system that is better positioned in the global network (Altbach, 1998), they are indeed the brain-power stored overseas. They not only help mainland scholars enter into the international knowledge system, but also maintain broad contacts with other scholars in the world and conduct various international research collaborations. They thus play a unique role in linking China more closely to the international scholarly community. In this sense, their stories endorse China's policies to encourage free movement of Chinese knowledge *diaspora* to and from China to serve China's development in various ways.

There are, however, a number of restrictions at different levels that counteract the effects of their research collaboration with China. These range from the daily heavy workload and the excessive accountability system, to the difficulty in gaining funding from both Australia and China. This suggests the influence of neo-liberal globalization and its related entrepreneurialism and academic capitalism on the higher education systems in both countries. Against such a backdrop, not every member of the Chinese knowledge *diaspora* at Monash University expressed a clear intention to act against the negative influence of globalization. Indeed, some choose to compromise. Relatively speaking, Chinese academics in China itself appear to be influenced by globalization even more profoundly, and traditional academic values are at risk in the relentless pursuit of money (Yang,

2005). This has a direct impact on their collaborations with the Chinese knowledge *diaspora*.

Despite all the difficulties, the belief in the significance of such collaborations remains. It is even further enhanced on the basis of the Chinese knowledge *diaspora*'s strong passion for China, and on China's emergence as a global power. More generally, my case study demonstrates the special value of *diaspora* scholars who have travelled widely and experienced different cultures and intellectual traditions. They are a particularly important asset within a context of intensified globalization, and thus deserve better treatment than they have usually received.

Note

1 The Group of Eight (Go8) is a group of eight Australian tertiary institutions that are considered the most prestigious universities in Australia. It was established informally as a network of vice-chancellors in 1994 and was formally incorporated in 1999. The group is seen as Australia's version of the Ivy League, consisting of the most prestigious and wealthy universities in the country. Membership of the group consists of the vice-chancellors (presidents) of: The Australian National University, Monash University, The University of Adelaide, The University of Melbourne, The University of New South Wales, The University of Queensland, The University of Sydney and The University of Western Australia.

References

Altbach, P. G. (1998), *Comparative Higher Education: Knowledge, the university and development*, London: Ablex Publishing Corporation.

Anderson, B. (1991), *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, London and New York: Verso.

Appadurai, A. (2001), 'Grassroots globalization and the research imagination', in A. Appadurai (ed.) *Globalization*, Durham: Duke University Press: 1–21.

Auriol, L. and Sexton, J. (2002), 'Human resources in science and technology: measurement issues and international mobility', OECD (ed.) *International Mobility of the Highly Skilled*, Paris: OECD, 13–38.

Ballard, B. and Clanchy, J. (1984), *Study abroad: A manual for Asian students*. Kuala Lumpur: Longmans.

Barker, M., Child, C., Gallois, C. and Jones, E. (1991), 'Difficulties of overseas students in social and academic situations', *Australian Journal of Psychology*, 43 (2): 79–84.

Bhagwati, J. H. and Rodriguez, C. (1976), 'Welfare theoretical analyses of the brain drain', in J. Bhagwati (ed.) *The Brain Drain and Taxation: Theory and empirical analysis*, Amsterdam North-Holland: 85–111.

Bogdan, R. C. and Biklen, S. K. (2003), *Qualitative Research for Education: An introduction to theory and methods*, Boston: Pearson Education.

Burbules, N. C. and Torres, C. A. (ed.) (2000), *Globalization and Education: Critical perspectives*, New York: Routledge.

Cao, C. (2004), 'Chinese science and the "Nobel Prize" complex', *Minerva*, 42 (2): 151–172.

Cartier, C. (2003), 'Regions of *diaspora*', in J. C. L. Ma and Cartier, C. (eds) *The Chinese Diaspora: space, place, mobility, and identity*, Lanham, MD: Rowman and Littlefield: 379–390.

Cervantes, M. and Guellec, D. (2002), 'The Brain Drain: old myths, new realities', *Observe*. Online at http://www.oecdobsever.org (accessed 19 October 2004).

Chalamwong, Y. (2004), 'The migration of highly skilled Asian workers in OECD member countries and its effects on economic development in East Asia', Online at http://www.oecd.org/dataoecd/27/56/31857618.pdf (accessed 26 September 2004).

Choi, H. (1995a), *An International Scientific Community: Asian scholars in the United States*, New York: Praeger.

Choi, H. (1995b), 'Reverse brain drain: who gains or loses?' *International Higher Education*, 2: 7–8.

Dzvimbo, P. (2003), 'The international migration of skilled human capital from developing countries'. Online at http://www.worldbank.org/afr/teia/conf_0903/peter_dzvimbo.pdf (accessed 5 May 2004).

Gaillard, J. and Gaillard, A. M. (1998), 'The international circulation of scientists and technologists: a win–lose or win–win situation?' *Science Communication*, 20: 106–115.

Gilbert, H., Khoo, T., and Lo, J. (ed.) (2000), *Diaspora: Negotiating Asian-Australia*, St. Lucia, Queensland: University of Queensland Press.

Grubel, H. (1987), 'The economics of the brain drain', in G. Psacharopoulos (ed.) *Economics of Education Research and Studies*, Oxford: Pergamon Press: 201–206.

Hancock, D. R. and Algozzine, B. (2006), *Doing Case Study Research: A practical guide for beginning researchers*, New York: Teachers College Press.

Hesse-Biber, S. N. and Leavy, P. (ed.) (2004), *Approaches to Qualitative Research*, New York: Oxford University Press.

Hugo, G. (2002), 'Migration policies designed to facilitate the recruitment of skilled workers in Australia', in OECD (ed.) *International Mobility of the Highly Skilled*, Paris: OECD: 291–320.

Hugo, G. (2006), 'Australian experience in skilled migration', C. Kuptsch and Pang, E. F. (ed.) *Competing for Global Talent*, Geneva, International Institute for Labor Studies: 143–145.

Johnson, H. (1968), 'Internationalist model', W. Adams (ed.), *The Brain Drain*, New York: Macmillan: 69–91.

Johnson, J. (2002), 'The reverse brain drain and the global diffusion of knowledge', Georgetown *Journal of International Affairs*, Summer/Fall: 125–131.

Kapur, D. (2001), '*Diaspora*s and technology transfer', *Journal of Human Development*, 2: 265–286.

Kuptsch, C. and Pang, E. F. (eds) (2006), *Competing for Global Talent*, Geneva: International Institute for Labor Studies.

Li, P. (2005), 'Immigration from China to Canada in the age of globalization: issues of brain drain and brain loss', paper presented at a conference on the transnational flow of Chinese human capital, Hong Kong University of Science and Technology, Hong Kong, October.

Lowell, L. and Gerova, S. (2006), *Diasporas* and *Economic Development: State of knowledge*, Washington, D.C.: Institute for the Study of International Migration, Georgetown University.

Lucas, R. (2001), '*Diaspora* and development: highly skilled migrants from East Asia', Online at http://www.bu.edu/econ/ied/dp/papers/dp120.pdf (accessed 12 August 2004).

Ma, L. J. C., and Cartier, C. (ed.) (2003), *The Chinese Diaspora: Space, place, mobility, and identity*, Lanham, MD: Rowman and Littlefield.

Mahroum, S. (1999), 'Highly skilled globetrotters', OECD (ed.), *Mobilising Human Resources for Innovation: proceedings of the OECD workshop on science* and *technology labor markets*, Paris: OECD, 168–185.

Marginson, S. (2000), *Monash: Remaking the University*, Sydney: Allen and Unwin.

Marginson, S. (2006), 'Dynamics of national and global competition in higher education', *Higher Education*, 52: 1–39.

Marton, F., Dall'Alba, G., and Tse, L. K. (1996), 'Memorising and understanding: the keys to the paradox?' D. A. Watkins and J. B. Biggs (ed.), *The Chinese Learner: Cultural, psychological, and contextual influences*. Hong Kong, Comparative Education Research Centre: 69–83.

Meyer, J. B. and Brown, M. (1999), 'Scientific *diaspora*s: a new approach to the brain drain', paper presented at the world conference on science, Budapest, June.

Meyer, J-B., Kaplan, D., and Caran, J. (2001), *Scientific Nomadism and the New Geopolitics of Knowledge*, Oxford: UNESCO.

Mullan, F., Politzer, R. M. and Howard, C. D. (1995), 'Medical migration and the physician workforce: international medical graduates and American medicine', *Journal of American Medical Association*, 273: 1521–1527.

Namgung, S. U. (2009), *Returning Scholars in Korean Higher Education: a case study of internationalization of higher education*, unpublished Ph.D. thesis, University of Sydney.

Neuman, W. L. (2004), *Basics of Social Research: Qualitative and Quantitative Approaches*, Boston: Pearson Education.

OECD (Organization for Economic Co-operation and Development) (2002), *International Mobility of the Highly Skilled*, Paris: OECD.

Olesen, H. (2002), 'Migration, return and development: an institutional perspective', expert working paper prepared for the Centre for Development Research Project, Migration-Development Links: Evidence and Policy Options. Copenhagen, Centre for Development Research.

Partinkin, D. (1968), 'Nationalist model.' W. Adams (ed.), *The Brain Drain*, New York: Macmillan Company: 92–108.

Patton, M. (2002), 'Qualitative interviewing', in M. Patton (ed.) *Qualitative Research* and *Evaluation Methods*, Thousand Oaks: Sage: 339–384.

Pratt, D., Kelly, M., and Wong, W.S.S. (1999), 'Chinese conceptions of "effective teaching" in Hong Kong: towards culturally sensitive evaluation of teaching', *International Journal of Lifelong Learning Education*, 18 (4): 241–258.

Reis, M. (2004), 'Theorizing *diaspora*: perspectives on "classical" and "contemporary" *diaspora*', *International Migration*, 42: 41–60.

Rizvi, F. (2000), 'International education and the production of global imagination', in N. Burbules and Torres, C. (eds) *Globalization* and *Education: critical perspectives*; London: Routledge: 205–226.

Salt, J. (1997), *International Movements of the Highly Skilled*, OECD occasional paper no.3, Paris: OECD.

Saxenian, A. (2002), 'Brain circulation: how high-skill immigration makes everyone better off', *Brookings Review*, 20 (1): 28–31.

Saxenian, A. (2006), *The New Argonauts: Regional case study methods: integrating quantitative and qualitative knowledge*, California: Thousand Oaks: Sage Publications.

Schmidt, C. (2000), 'The analysis of semi-structured interviews.' in U. Flick, E. V. Kardorff and I. Steinke (eds) *A Companion to Qualitative Research*, Thousand Oaks: Sage, 253–258.

Shain, Y. and Barth, A. (2003), '*Diaspora*s and international relations theory', *International Organisations*, 57: 449–479.

Shuval, J. (2000), '*Diaspora* migration: definitional ambiguities and a theoretical paradigm', *International Migration*, 38: 41–57.

Solimano, A. (2002), *Globalizing Talent and Human Capital: Implications for developing countries*, Santiago: UN.

Solimano, A. and Pollack, M. (2004), *International Mobility of the Highly Skilled: The case between Europe and Latin America*, Santiago: ECLAC.

Spradley, J.P. (1979), *The Ethnographic Interview*, New York: Holt, Rinhart and Winston.

Stake, R. (2005), 'Qualitative case studies', in N. Denzin and Y. Lincoln (eds) *The SAGE Handbook of Qualitative Research*, 3rd Ed, Thousand Oaks: Sage: 433–466.

Sutter, R. G. (2005), *China's Rise in Asia: promises and perils*, Lanham, MD: Rowman & Littlefield.

Tsolidis, G. (2001), *Schooling, Diaspora and Gender*, Buckingham: Open University Press.

Wang, G. (2001), *Don't Leave Home: Migration and the Chinese*, Singapore: Times Academic Press.

Welch, A. R. and Zhang, Z. (2007), 'The rise of the Chinese knowledge *diaspora*: possibilities, problems and prospects for South and North', paper presented at the World University Network Forum Realizing the Global University, London, 14–15 November, 2007.

Wickramasekara, P. (2002), *Policy Response to Skilled Migration: Retention, return and circulation*, Geneva: International Labor Organization.

Wong, B. P. (2006), *The Chinese in Silicon Valley*, Lanham, MD: Rowman & Littlefield.

Yang, R. (2005), 'The Chinese professoriate in comparative perspective: self-perceptions, academic life, gender differences and internal differentiation', in A. R. Welch (ed.) *The Professors: Profile of a profession*, Dordrecht, Springer: 179–192.

Zweig, D. (2006), 'Learning to compete: China's efforts to encourage a '"reverse brain drain"', in C. Kuptsch and Pang, E. F. (eds) *Competing for Global Talent*, Geneva, International Institute for Labor Studies: 187–214.

Zweig, D., Chen, C. and Rosen, S. (2004), 'Globalization and transnational human capital: overseas and returnee scholars to China', *China Quarterly*, 179: 735–757.

Index