

e-Learning Initiatives in China

Pedagogy, Policy and Culture

Edited by Helen Spencer-Oatey



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Hong Kong University Press is honoured that Xu Bing, whose art explores the complex themes of language across cultures, has written the Press's name in his Square Word Calligraphy. This signals our commitment to cross-cultural thinking and the distinctive nature of our English-language books published in China.

“At first glance, Square Word Calligraphy appears to be nothing more unusual than Chinese characters, but in fact it is a new way of rendering English words in the format of a square so they resemble Chinese characters. Chinese viewers expect to be able to read Square Word Calligraphy but cannot. Western viewers, however are surprised to find they can read it. Delight erupts when meaning is unexpectedly revealed.”

— Britta Erickson, *The Art of Xu Bing*

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1

Introduction

Helen Spencer-Oatey

If [Chinese] education is to serve social progress and economic development, the information technology (IT) for it must advance ahead of social progress. (Zhou 2006: 229)

These are the words of Zhou Ji, the current Chinese Minister of Education. They hint at the huge educational challenge that China is facing at present and suggest the significant role that e-learning can play in the (educational) development of the country.

Let us consider the following statistics:

- 318,783,000 people in different types of Chinese educational institutions at all levels in 2002 (Li 2004: 45)
- About 204 million children attending primary and secondary schools (Chen 2006)
- Over 20 million students enrolled in China's colleges and universities in 2004 (Huang, Jiang and Zhang this volume)
- 970,506 academic staff at China's colleges and universities in 2004 (Zhou 2006: 13)
- About 470,000 teachers of English at secondary school level in China (Chen 2006)
- 111 million Internet users in China (CNNIC 2006)

As Li Lanqing (2004), Vice-Premier of the Chinese State Council from 1993 to 2003, points out, China has the largest educational system in the world. In fact, the number of people enrolled in Chinese schools is larger than the entire population of the United States. So, he stresses that high levels of efficiency are essential:

... only by achieving the highest efficiency in the world can we really come to grips with all the problems associated with education in this vast country of ours. (Li 2004: 45)

It is hoped that information technology, and e-learning opportunities in particular, will help spearhead this efficiency.

These facts form the backdrop to the *raison d'être* of this book. The book is an outcome of a major Sino-UK initiative: the *Sino-UK e-Learning Programme (eChina-UK)*. This programme was established to help promote innovation in e-learning, as well as to play a small part in addressing these massive educational challenges in China. The *eChina-UK Programme* forms part of a strategic collaboration between Britain and China in higher education, and it was set up by the Higher Education Funding Council for England (HEFCE) and the Chinese Ministry of Education (MoE), in order to promote innovative developments in e-learning for the training of teachers/lecturers at secondary and tertiary levels. Teacher education is of strategic importance in China, and as the following section explains, the MoE is bringing in a series of pedagogic reforms which are necessitating extensive in-service training for their effective implementation. The *eChina-UK Programme* was charged with the task of utilizing a new medium of learning (e-learning) to help implement these reforms.

Pedagogic Reforms in China

Over the past few years, the MoE has been carrying out a major overhaul of educational practices at primary, secondary and tertiary levels in China, including reforms of the curricula, of textbooks, of the testing and evaluation systems, and of teaching methods. Much greater emphasis is being placed on student-centred learning and self-study, and the aim is to foster greater creativity and individuality in learners through a more task-based approach, through greater use of enquiry methods, and through greater interaction between teacher and learner. Zhou explains it as follows in relation to the higher education (HE) level:

With the deepening of reform and opening up in recent years, many universities have been exploring new modes of student training. . . . Universities . . . lay greater stress on the integration of theoretical and practical teaching. Some large, research-oriented universities have gradually implemented a mode of advisory teaching, where an advisor provides academic guidance to a number of undergraduate students. For students, it is an explorative or inspirational learning mode, different from the traditional receptive learning mode. Teachers are better prepared to teach in the form of discussion and elicitation so as to inspire initiative and enthusiasm in their students. Senior undergraduate students in many universities participate in research projects headed by professors. These universities also have research funds for students. To cultivate the students' ability to apply book knowledge in analyzing and solving practical problems, universities implement a teaching mode that combines learning, research, and industry. Students are required to do internships in laboratories, factories, and enterprises. More and more undergraduate students derive their graduation theses from industrial production and social practice. (Zhou 2006: 88–89)

The MoE is also bringing in reforms with regard to the learning of English as a foreign language. For a long time, the MoE has attached great importance to the learning of English, but they are aware that many Chinese learners are not as communicatively competent in English as they would wish. They have therefore proposed a number of reforms (MoE

2001, 2003), which Jin and Cortazzi describe as follows, in relation to the teaching of English at university level:

At university level, there should be consistency and continuity with the English teaching from schools . . . ‘College English’ should develop and enhance students’ English at higher levels yet be geared to students’ individual or local needs (previously, mass teaching had understandably taken a fairly uniform but consistent approach across the country). This movement towards institutional flexibility is echoed in the classroom where teachers are encouraged to develop more varied learning and study strategies among students, and to use multiple modes and models for learning and teaching, including the uses of ICT in e-learning (to cater for greater student numbers). . . . The orientation towards flexibility and student-centred learning includes self and peer assessment. However, there is a gap between these aspirations and most current practice. (Jin and Cortazzi 2006: 15)

As Jin and Cortazzi (2006: 15) point out, all of these developments (including those reported by Zhou (2006)) “can be viewed as national targets for changing practices”, rather than practices that are already widely-implemented.

In 2001, the MoE took another step to help develop people’s communicative competence in English: they started promoting bilingual teaching. They want university academic staff to use English to teach a range of undergraduate subjects, and in fact stated that five to ten percent of courses in disciplines such as bio-technology, information technology, finance and law should be taught in English (or another foreign language) by 2004.¹ For those who are unable to reach this target, they encourage the use of English language resources (such as textbooks) as a stepping stone to bilingual teaching.

e-Learning developments go hand in hand with these reforms. The MoE has initiated a massive programme of infrastructure development (see Kang and Song this volume; Huang, Jiang and Zhang this volume), and they are encouraging the use of e-learning in on-campus education, in distance-learning education, and for educational provision in rural areas. However, a fundamental issue for effective e-learning is the availability of good quality online resources. The MoE, therefore, established the ‘Project for Building State-Level Quality Courses’ in 2003. This project aims to establish, within a five-year period (2003–07), 1,500 state-level quality online courses across a range of subjects.² The contents are to be made available free of charge to universities across the country, with a view to improving the overall quality of education through the sharing of high-quality teaching resources.

The *eChina-UK Programme*

This is the educational context in which the *eChina-UK Programme* was established. Britain, like China, was keen to learn more about e-learning, and so a collaborative programme in this area was appealing to both HEFCE and the MoE. The overarching aims of the programme were identified as follows:

- a. strengthen collaboration between China and the UK by sharing experience in the use of Information and Communication Technologies (ICT), and particularly the Internet, for distance and flexible learning; and
- b. develop and pilot innovative distance education courseware in selected areas.

(HEFCE 2002: 9)

It was agreed that the focus should be on teacher education, and three broad areas were identified for the first phase of the programme:

- Generic pedagogic approaches and methods
- Teaching English as a foreign language
- English for bilingual teaching and academic exchange

Key British and Chinese universities were selected to take part in this first phase of the programme (see Spencer-Oatey and Tang, this volume, for more details on this process), and the projects and partnerships shown in Table 1.1 were established.

Table 1.1
The Projects and Partnerships of the Initial Phase of the *eChina-UK Programme*

Topic Area		Project Name	Partner Universities	
			Chinese	British
Generic approaches and methods: teaching methodology, educational psychology and educational technology		<i>Deft</i> (Developing e-Learning for Teachers) Project	Beijing Normal University	World Universities Network Lead: University of Manchester; Supporting: University of Sheffield, Southampton and Bristol
Teaching English as a Foreign Language	Secondary level	Secondary eELT (e-English Language Teaching)	Beijing Normal University	University of Nottingham
	Tertiary level	Tertiary eELT (e-English Language Teaching)	Beijing Foreign Studies University	University of Nottingham
English language for Chinese university lecturers of English)		<i>CUTE</i> (Chinese University Teachers)	Tsinghua University	Open Cambridge Lead: University of Cambridge

It was hoped that, by working together on specific tasks, the collaborative partnerships would yield a range of insights of benefit to both countries:

In this way, lessons could be drawn from a range of pilot projects, including the benefits and issues of pedagogy, working cross-culturally, and of publishing intellectual property rights. The projects could also inform the development of national policy initiatives in distance education in both countries, particularly e-universities. (HEFCE 2002: 9)

In fact, the projects faced a complex, interacting set of challenges around these various issues. They needed to:

- train teachers via a medium of learning (e-learning) that the in-service teachers were mostly unfamiliar with;
- train teachers via a pedagogic approach that they were mostly unfamiliar with;
- train teachers to implement a different pedagogic approach in their own teaching.

Moreover, before they could do this, they needed to form effective Sino-UK collaborative partnerships that entailed mutual understanding and trust, and they needed to develop a *modus operandi* for designing and producing innovative e-learning materials. Needless to say, all this was extremely demanding, but the rewards have been immense.

The projects started in 2003 and were completed in 2005. Everyone learned very large amounts through the collaborations, and some of these insights are reported in this book. Further information about the programme as a whole, the professional learning that occurred, the online courseware that was developed, and the research insights can be found on the *eChina-UK* website, <http://www.echinauk.org/>.

Focus and Outline of This Book

As the title of the book indicates, the primary focus of this book is on e-learning in China. The book provides background information on e-learning policies in China, particularly at the HE level; it explores issues of e-learning design both in and for the Chinese context; and it discusses the interplay between pedagogy and technology. Like HEFCE (2005: 5), we use the term e-learning quite broadly to refer to “the use of technologies in *learning* opportunities”, and thus to include the use of ICT for on-campus learning as well as for distance learning. However, much (but not all) of the policy information about e-learning in this book refers to distance learning, since so many Chinese government policies on e-learning apply only to off-campus provision (see Kang and Song this volume).

However, the book is about much more than e-learning. It is also about pedagogic beliefs and practices, educational systems and policies, international collaboration processes, as well as project management. This is because working collaboratively on the e-learning projects has entailed addressing all of these issues. The chapters of the book are thus grouped into the following sections:

1. Background
2. Designing and delivering online courses in China
3. Managing the interplay between pedagogy and technology
4. Managing collaboration processes
5. Addressing policy issues

Section 1, Background, comprises two chapters. Chapter 1 is this introductory chapter. Chapter 2, by Kang and Song, is an historical overview of e-learning in HE in China, focusing particularly on policy developments. It provides a very useful contextual backdrop against which all the other chapters need to be interpreted. Section 2 focuses on the various pedagogic issues that the project teams faced in designing and delivering their online courses, and Section 3 explores how the teams managed the interplay between pedagogy and technology. Section 4 turns to the processes of collaboration that the teams experienced, both internationally and inter-professionally. The final section, Section 5, picks up on the policy issues that Kang and Song introduce in Chapter 2. It explores the challenges that need to be addressed, both nationally and internationally, in developing and implementing e-learning policy. More specific information on each of the chapters in Sections 2 to 5 is provided in the introduction to each of the sections.

Needless to say, the theme of e-learning runs through all of the chapters in the book, but another main theme is the development of intercultural understanding. This development of intercultural understanding is vital for effective collaborative working, and it is needed at many different levels, from the micro-context of a particular activity or communicative interaction to the macro-context of educational policy and institutional structures. Many of the chapters of this book thus deal with this issue.

The development of intercultural understanding through international collaboration is a vital element in the internationalization of HE — an issue that is of growing interest and concern to both British and Chinese universities, as well as many others in the world. According to Fielden (2006), the key features of an internationalized university include the following:

- an international mix of students, either on the home campus or on offshore campuses;
- an international mix of teaching and research staff;
- curricula that are ‘international’ (or at least culturally independent where that is possible);
- domestic students with knowledge of other cultures and languages through study of foreign languages or study abroad;
- international teaching and research collaborations.

The insights that we have gained from the *eChina-UK Programme*, and that are discussed in this book, apply directly to many of these issues, including ‘international’ curricula, international teaching and research collaborations, and they apply indirectly to others, such as the development of domestic students with knowledge of other cultures and languages.

At the time of writing, we are still deepening our understanding of all of the issues associated with these two themes of e-learning and intercultural understanding. Three further projects have been approved, which are follow-ups from the initial projects that are reported in this book. Insights from these new projects will be disseminated on our website, <http://www.echinauk.org/>, in due course.

Section 2

Designing and Delivering Online Courses in China

This section focuses on issues associated with the design and delivery of online courses in China, and explores the following crucial questions:

- What types of online courseware design are currently widespread in China, and what are their relative strengths and weaknesses?
- How can online courseware be designed so that learner autonomy (which is so important for online study) is promoted?
- Studying online can be a lonely experience, so how can the courseware be designed in order to facilitate the building of communities of online learners?
- To what extent is it feasible for foreign languages to be taught wholly online, or is it more effective if online learning is integrated with face-to-face learning opportunities?
- Effective e-learning tutors are vital to the success of an online course, so how can they best be trained?

Chapter 3, *Learning by Multimedia and Multimodality*, by Gu, provides very helpful background information on Web-based courseware design in the Chinese context. He identifies and illustrates six types of design that are current in China, and analyses their strengths and weaknesses from both policy and pedagogic perspectives. He presents a number of principles that can be used for evaluating courseware design, and argues that the ‘Learning-process-model Design’ is the most effective.

In Chapter 4, McGrath, Sinclair and Chen take up the issue of learner autonomy. They review the literature on learner autonomy from both Western and Chinese perspectives, and then demonstrate how they designed materials for a course on the methodology of English Language teaching that aimed to promote learner autonomy. They illustrate how they offered ‘scaffolded’ experiences in the following: making choices, assessing self, monitoring progress, consciously reflecting on learning, and making independent decisions. The authors then describe the participants’ responses to the materials, which were very positive, but they emphasize the crucial importance of learners receiving excellent e-tutor support.

Successful autonomous learning does not necessarily mean learning in isolation; on the contrary, it can entail effective co-operation with others. This is the theme taken up by Hall, Hall and Cooper in Chapter 5. They argue that courseware designers need consciously to aim at promoting interactivity and social cohesion online and they then illustrate how this can be done. They describe two learning tasks that were designed to build a sense of community among learners and to promote appropriate self-disclosure, and they report how learners reacted to these activities.

Chapter 6 turns to a somewhat different yet vitally important question: whether all aspects of foreign language learning can be fostered online, or whether the online courseware needs to be integrated with face-to-face learning opportunities. Marsh et al. argue strongly for an integrated approach, and describe how they achieved this in the design of their *CUTE* (Chinese University Teacher Training in English) course.

The final chapter in this section, by Joyes and Wang, takes up the crucial issue of the training of e-learning tutors. However brilliantly a course is designed, it needs tutors to provide effective support for the learners. Yet course providers are faced with a dilemma:

should they train their e-learning tutors to operate on this specific course (e.g. familiarize them with types of learning activities included in the course, and with the technical functionality and characteristics of the technical platform being used), or should they provide them with more generic training that is more broadly applicable? Joyes and Wang grapple with this question in Chapter 7 and propose a generic framework for the training of e-learning tutors that can be used across a very wide variety of contexts.

Samples of many of the online materials described in this section can be viewed on the *eChina-UK* website: <http://www.echinauk.org/>. The website also provides further rationale for their design.

Section 3

Managing the Interplay between Pedagogy and Technology

The previous section of the book focuses on pedagogic design issues for online courses. In this section, we turn to the interplay between pedagogy and technology, because the design and development of online courseware requires a team approach in which academics work closely with technical staff. In the *eChina-UK Programme*, all projects were convinced that pedagogy should lead the technology, rather than vice versa, but on a practical level, there were numerous issues that needed to be addressed.

Zähner, in Chapter 8, discusses the factors that the *eChina-UK CUTE* Project team needed to consider when deciding what technical platform to use for their project. He explains the rationale for the choices they made in their project, and demonstrates how important it is to consider local contextual factors. In the second half of the chapter, he turns to a related question: where and how the technical development of the online materials should take place. This is a crucial question, which all distributed teams need to face and which the *eChina-UK* project teams each handled in slightly different ways (see the Production Process sections of the Case Studies on the *eChina-UK* website, <http://www.echinauk.org/>).

In Chapter 9, Joyes addresses another aspect of the interplay between pedagogy and technology — how the potential of new technologies can be exploited to improve the pedagogy of online courseware. He focuses on the issue of personalization in learning, and argues that designers should take advantage of the ways in which a platform can store information in its database. He presents two case studies which illustrate how personalized and motivating a learning experience can become when the affordances of a database are exploited effectively.

The e-learning tools that were developed by the *eChina-UK* teams in order to meet pedagogic needs can be viewed, interacted with, and downloaded free of charge from the *eChina-UK* website: <http://www.echinauk.org/>. The website also provides further extensive discussion of the pedagogy-technology interface in e-learning.

Section 4

Managing Collaboration Processes

An important aim of the *eChina-UK Programme* has been to strengthen collaboration between China and the UK. It was hoped that if British and Chinese partners worked together on a common task, there would be a number of positive outcomes for both countries, including the following:

- the emergence of innovative ideas about e-learning design, which could be tested through the delivery of pilot courses;
- a growth in mutual understanding of HE issues in each other's contexts, including those pertaining to e-learning;
- the forging of collaborative partnerships which would extend beyond the life of the programme.

However, effective collaboration does not happen by chance, of course — it needs to be managed appropriately. Martha Maznevski, who has researched diversity in groups in the business context, argues as follows:

Understanding our differences is the first step to managing them synergistically. (Maznevski 1994: 549)

The common element in high performing groups with high member diversity is integration of that diversity. . . . diversity leads to higher performance only when members are able to understand each other, combine, and build on each others' ideas. (Maznevski 1994: 537)

The *eChina-UK* project members were diverse in numerous ways (including nationality, academic specialty, professional role, pedagogic beliefs, prior experience of e-learning, level of bilingualism, level of seniority, personality), and all of these factors affected team processes. We found that even that first step of 'understanding our differences' was more challenging than we ever anticipated. This section, therefore, explores some of these challenges.

Spencer-Oatey and Tang, in Chapter 10, take a programme management perspective and discuss the various elements of collaboration that needed to be managed effectively at different stages of the programme. Using as a framework Canney Davison and Ward's (1999) 'best practice guidelines' for leading and managing international teams, they consider the various issues that arose at each stage and the ways in which they were handled. They end the chapter with a set of recommendations for handling future collaborations of this kind.

In Chapter 11, McConnell, Banks, and Lally explore the similarities and differences in pedagogic beliefs and approaches that they experienced in their project. They explain the challenges they faced in developing an understanding of these similarities and differences, the impact that their varying perspectives had on the materials design and development process, and the ways in which they sought to harmonize their viewpoints and achieve a new, intercultural approach.

Motteram, Forrester, Goldrick and McLachlan, in Chapter 12, emphasize the multiple voices within their project team. Using Activity Theory (e.g. Engeström 2001) as a conceptual framework, they draw attention to the crucial role of ‘boundary crossers’. They argue that an artefact or a tool can be a helpful focus to discussions and collaborations that attempt to cross boundaries, and they illustrate their argument by describing the role that the Virtual Learning Environment (VLE) had within their project.

Section 5

Addressing Policy Issues

This last section of the book turns to issues of policy. Policy forms the backdrop to all of the other issues explored in the book, and this section illustrates the close interplay between policy and practice.

Chapter 13 focuses on intellectual property (IP). In any collaborative venture, the creation, management and use of intellectual property need to be agreed among the various members. However, this can be a challenging task, especially for e-learning teams who have little experience of handling IP issues. When the collaboration is a cross-national one, it is even more complex. In this chapter, Windrum reports the experiences of the *eChina-UK* project members in relation to this, and concludes with a suggested schema for people to address IP rights issues in future collaborative ventures of this kind.

The next two chapters turn to policy initiatives. In Chapter 14, Huang, Jiang and Zhang explain the policy of the ‘Informationization’ of higher education (HE) in China. They identify the initiatives that the Ministry of Education has taken, they report the impressive progress that China has achieved in applying information technology to HE, and they indicate why all of this ‘top-down’ policy implementation is so important in China. The final section of their chapter identifies the challenges that China currently faces in bringing about the informationization of HE in China.

In the final chapter, Conole and Dyke take a very different perspective from Huang et al., arguing that e-learning initiatives should move away from top-down, large-scale commodification, to more local, context-sensitive co-modified developments. They start by describing the massive changes that have taken place globally — in society, in education and in technology — and they maintain that these changes have had an impact on educational policy and practice. They identify three main shifts within education: a shift from a focus on information to communication, a shift from a passive to more interactive engagement, and a shift from a focus on individual learners to more socially situative learning. They argue that e-learning initiatives need to promote more personalized and localized developments.

Editor's Afterword: Outstanding Issues

This book has mainly focused on the issues, insights and achievements of the initial *eChina-UK* projects that took place from 2003 to 2005. At the end of those projects, we were all deeply aware that the process of developing mutual understanding and of achieving innovative developments in e-learning was only just beginning. We felt that we had particularly more to learn in the following areas:

- in developing a deeper understanding of the pedagogic beliefs and perspectives that are held by the joint project members and that inform the design and delivery of our e-learning materials;
- in dealing with scalability issues for courses that are designed to be interactive and that stress the importance of collaborative learning;
- in identifying scalable and reproducible ways of training e-learning tutors, so that they can provide the support that is needed for effective online learning.

As a result, the *eChina-UK Programme* moved into a second phase. A further set of projects was approved, and at the time of writing, these projects are being implemented. Information on these new projects and the insights that emerge from them will be made available, in due course, on the *eChina-UK* website: <http://www.echinauk.org/>.

Notes

CHAPTER 1

1. 教育部关于印发《关于加强高等学校本科教学工作提高教学质量的若干意见》的通知 [Notification from the MoE: A few points re strengthening the teaching of university undergraduates, and raising the quality of teaching]. Available in Chinese at <http://www.pgzx.edu.cn/upload/files/zxwd/jg20014.pdf> [Accessed 7 August 2006]. For a brief description in English, see Zhou 2006: 96.
2. For a description in English of the scheme, see http://www.core.org.cn/en/resources_project/chinaocw.htm, and for a list of courses developed so far, see http://www.core.org.cn/cn/jpkc/index_en.html [Both accessed 8 August 2006]

CHAPTER 2

1. 1 RMB = 0.125447 USD in August 2006.
2. Altogether 26: Tsinghua University, Peking University, Renmin University, Beijing Normal University, Beijing Jiaotong University, Beijing Post and Communications University, Beijing Institute of Technology, Beijing Foreign Studies University, North Eastern University, North East Agriculture University, Tianjin University, Shandong University, Shanghai Jiaotong University, Fudan University, Tongji University, South East University, Sun Yat-sen University, Zhejiang University, Wuxi Light Industry University, Sichuan University, Xian Jiaotong University, and CUBT.
3. Altogether 5: Beijing University of Chinese Medicine, Communication University of China, Beijing Language and Culture University, Hua Zhong Normal University, and Lanzhou University.
4. Zhejiang University, Beijing University of Aerospace and Astronomy (BUAA), Northeast Finance University, Xian Jiaotong University, Beijing Jiaotong University etc.
5. School-to-school communication through the Internet.
6. For more information (in Chinese), see <http://www.wljj.cn/cms/> [accessed 8 August 2006].
7. For more information, see <http://www.chinaedu.net/english/> (in English) or <http://www.pcedu.com/> (in Chinese).

CHAPTER 3

1. This study is part of the key project (02JAZJD740004) funded by the Ministry of Education, People's Republic of China.
2. I have drawn a sharp distinction between e-learning and e-education, or between online learning and online education (between 网上学习 and 网络教育). I regard learning as the learner's behaviour, whereas education is a social/political system that enables learners to learn. In China, the two are treated indiscriminately both in conception and in practice. This is a fallacious act.
3. 1 RMB = 0.125447 USD in August 2006.
4. The term environment is used as a technical term, as defined by Gibson (1986: 7), referring to "the surroundings of those organisms that perceive and behave". To Gibson, "the words *animal* and *environment* make an inseparable pair. Each term implies the other. No animal could exist without an environment surrounding it. Equally, although not so obvious, an environment implies an animal ... to be surrounded" (Gibson 1986: 8).

CHAPTER 4

1. The MoE's aim is that:
 - by the end of 2007, 70 percent of all primary school teachers should have a three-year diploma or a bachelor's degree, and that by 2010 all primary school teachers should have at least a diploma;
 - by the end of 2007, 50 percent of all junior high school teachers should have a bachelor's degree and by 2010 all junior high school teachers should have at least a bachelor degree;
 - by 2010 a certain [unspecified] proportion of senior high middle school teachers should have a master's degree.(See [in Chinese] <http://www.cutech.edu.cn/%5Cjiaoyuxinxihua%5C000014.asp> and <http://www.cau.edu.cn/jwc/wenjian/006.htm>; both last accessed 11 December 2006.)
2. The core UoN team comprised: Dr Carol Hall (project director), Dr Gordon Joyes (project manager), Dr Ian McGrath (academic director, UoN-BFSU), Dr Barbara Sinclair (academic director, UoN-BNU), Dr Kevin Caley (learning technologist), Mr Quang Luong (flash designer). In keeping with the collaborative nature of the project, the new curriculum materials illustrated here were scripted by Dr McGrath and Ms Zehang Chen (BNU); those on grammar were designed by Ms Ann Smith (CELE, UoN) and Dr Barbara Sinclair (UoN).
3. Although registration was limited to teachers with regular access to online facilities, use was also made of print materials and CDs, and online coursework was complemented by face-to-face tutorial meetings at a local learning support centre.
4. A fuller description of this series of activities can be found in McGrath (2006).

CHAPTER 6

1. For more information on CULP, the Cambridge University Language Programme, see http://www.langcen.cam.ac.uk/develop/res_dev.php?c=2 and http://www.langcen.cam.ac.uk/develop/res_dev.php?c=14 [both accessed 8 August 2006].

2. Learning Management System (or LMS) is a software package that enables the management and delivery of learning content and resources to students. Most LMS systems are Web-based, to facilitate ‘anytime, anywhere’ access to learning content and administration.
3. Definition taken from Collins Cobuild English Language Dictionary.
4. IELTS (the International English Language Testing System) is a worldwide recognized standardized exam of English language proficiency used to screen overseas applicants to UK universities and colleges. For further information, see <http://www.ielts.org/>.
5. Further details on CUTE are available in the Case Study section of the eChina-UK website: <http://www.echinauk.org/>.

CHAPTER 10

1. It is impossible to identify precisely the number of people who participated, because members varied in the extent to which they were involved. For the interviews for this research, we focused on the members who worked for the project for over three months.
2. This course was aimed at middle school teachers who are non-specialists in English, and so much of the final courseware needed to be in Chinese.
3. For a description in English of the scheme, see http://www.core.org.cn/en/resourses_project/chinaocw.htm, and for a list of courses developed so far, see http://www.core.org.cn/cn/jpkc/index_en.html [both accessed 8 August 2006].
4. <http://www.rae.ac.uk> [accessed 25 May 2007].

CHAPTER 11

1. Two other modules were developed for this project by staff at the University of Manchester and at BNU.
2. Examples of the Unit 1 materials can be seen on the eChina-UK website: <http://www.echinauk.org/cases/sheffield/materials.htm> [accessed 14 August 2006].

CHAPTER 12

1. The full team on the UK and China sides consisted of a large number of people. The full list can be found on the eChina-UK website, <http://www.echinauk.org/cases/deft.php/>.
2. The preparation of the Sheffield materials was undertaken separately and is discussed in McConnell et al. this volume.
3. Basic education refers to public education for students aged between three and eighteen years and covers kindergarten, primary and junior, middle and senior high schools.
4. See also <http://www.elearning.ac.uk/features/translation> [accessed 9 August 2006] for another attempt at getting teachers talking to technicians.
5. Engeström (n.d.) explicates these elements as follows: “In the model, the subject refers to the individual or sub-group whose agency is chosen as the point of view in the analysis. The object refers to the ‘raw material’ or ‘problem space’ at which the activity is directed and which is molded and transformed into outcomes with the help of physical and symbolic, external and

internal mediating instruments, including both tools and signs. The community comprises multiple individuals and/or sub-groups who share the same general object and who construct themselves as distinct from other communities. The division of labor refers to both the horizontal division of tasks between the members of the community and to the vertical division of power and status. Finally, the rules refer to the explicit and implicit regulations, norms and conventions that constrain actions and interactions within the activity system". <http://www.edu.helsinki.fi/activity/pages/chatanddwr/activitysystem/> [accessed 9 August 2006]

6. Vygotsky's first generation considered only the subject, instruments and objects; to this were added rules, community and division of labour. In the third generation we see two different activity systems working on a 'potentially shared object'.
7. The other three principles are: (1) "that a collective, artefact-mediated and object-oriented activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis"; (2) ". . . the multi-voicedness of activity systems. An activity system is always a community of multiple points of view, traditions and interests"; (3) ". . . historicity. Activity systems take shape and get transformed over lengthy periods. Their problems and potentials can only be understood against their own history."
8. When the project started, the school was known as the School of Networked Education. It later became the School for Continuing Education and Teacher Training (SCETT), and Huang Ronghuai became head of the School of Educational Technology.
9. See <http://moodle.org> [accessed 9 August 2006].
10. He was also the head of technical support group prior to the reorganization of the school.

CHAPTER 14

1. The cited currency unit here and thereafter is RMB yuan (1 RMB = US\$0.125447 in August 2006).
2. The Self-study HE Examination system allows "self-taught students to take examinations that lead to a junior college diploma. It was a government initiative in the early 1980s to 'open up schooling avenues' for the learning public and encourage citizens to turn themselves into well-educated members of society through self-study. After twenty or so years of trial and error, the HE examinations for the self-taught have emerged as one of the most popular educational activities in China" (Zhou 2006: 187).
3. 'Regular institutions of higher learning' refer to those funded directly by the state.
4. The '211 Project' is a governmental initiative which aims to strengthen about 100 top institutions of HE and key disciplinary areas as a national priority for the twenty-first century. It has three major components: the improvement of overall institutional capacity, the development of key disciplinary areas, and the development of the technical support services (such as CERNET and the Modern Equipment and Facilities Sharing System, MEFSS) in HE. For further details see <http://www.edu.cn/20010101/21852.shtml/> [accessed 30 May 2006].
5. Under a central government program started in 1998 called the '985 Project', 10 of China's leading universities were given special three-year grants in excess of 1 billion RMB (US\$124 million) for quality improvements. Peking and Tsinghua universities, the top two ranked institutions in mainland China, each received 1.8 billion RMB. These grants were awarded in

addition to special financial support provided by the ‘211 Project’, a separate program aimed at developing 100 quality universities for the twenty-first century. In 2004, the second phase of the ‘985 Project’ was launched and the number of universities under its purview was enlarged to 30. (http://www.atimes.com/atimes/China_Business/HB18Cb05.html)

6. For further details see 国家创新体系（大学）框架基本形成，《中国教育报》2006年1月9日第1版 [The framework of the national innovation system (university) takes shape. *China Education News*, 9 January 2006, p. 1.]
7. Internet users are defined by the CNNIC as ‘any Chinese citizen who spends at least 1 hour on the Internet weekly’.
8. Zhao Qingping, Vice Minister of Education, delivered a speech at the 2004 annual meeting for curators of e-Learning Education Institution entitled “Strive hard to promote educational informationization”, 2 February 2004.
9. For a description in English of the scheme, see http://www.core.org.cn/en/resources_project/chinaocw.htm, and for a list of courses developed so far, see http://www.core.org.cn/cn/jpkc/index_en.html [both accessed 8 August 2006].
10. Architecture and Reference [China e-Learning Technological Standard-1 (CELTS-1)]; Standard of technical terms (CELTS-2), Meta-data standard of learning objects (CELTS-3), Specification for Rule-Based XML Binding Techniques (C ELTS-4), IMS Content Packaging Information Model (CELTS-9), etc. More can be found from the website of the China e-Learning Technology Standardization Committee, <http://www.celtsc.edu.cn/680751c665875e93/folder.2006-04-03.8417036039/> [accessed 20 June 2006].

CHAPTER 15

1. See <http://www3.open.ac.uk/media/fullstory.aspx?id=7354&filter=general> for a press release and further information.
2. For more information see <http://oci.open.ac.uk/> [accessed 9 August 2006].
3. Derived from the Greek word *dromos* meaning ‘running’.
4. For more information see the MoE website: <http://www.moe.edu.cn/english/index.htm> [accessed 9 August 2006].

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