

# KNOWLEDGE TRANSFER IN INTERNATIONAL EDUCATIONAL COLLABORATION PROGRAMME : THE CHINA PERSPECTIVE

RICHARD LI-HUA

## Abstract

The paper reviews the literature of international development strategy of high education and examines current educational collaboration between UK and China incorporating both cultural and organisational factors that play a role in the whole process. Based on a comprehensive examination and analysis of the process of knowledge transfer/knowledge sharing, it attempts to address various challenges in capacity building of higher educational institutions through knowledge transfer. The paper also highlights the appropriateness and effectiveness of knowledge transfer/knowledge sharing during the implementation of the international academic collaboration programme.

**Keywords :** Knowledge Transfer/ Higher Education/ China/ UK

## 1. Introduction

In the twenty-first century, knowledge is widely recognised as the single most important factor in creating and sustaining superior organisational performance. The effective creation of knowledge depends upon knowledge transfer, knowledge sharing and organisational learning. University as the knowledge institution has been widely acknowledged. University knowledge transfer activities are an important and integral part of the work of high education sector as they are essential drivers for the government's economic and modernisation agendas, including enhancing competitiveness and improving quality of life. Knowledge transfer provides a route to innovation and development at all levels. Higher education is the great, largely unknown and certainly under-exploited resource contributing the creation of wealth and economic competitiveness. Many people outside higher education still do not recognize the capacity of that resource or how to get it, and many of those inside higher education do not know how best to connect with the outside world. Despite of a number of studies on the role of university in knowledge economy, how to explore the knowledge potential of higher education and link higher educational institutions with other institutional actors for innovation and economic growth has not been properly understood.

Globalisation is seen as offering more opportunity for both developed and developing nations. The developed countries can obtain huge marketplace for their surplus

---

producing power by selling goods, transferring technology by setting up joint venture etc, while the developing countries can acquire advanced technology and knowledge by offering new market opportunities and providing human resources and raw material. Therefore, the involvement of technology and knowledge transfer as a whole in developing the international collaboration programme seems to be an open secret. Furthermore, knowledge transfer/knowledge sharing has been widely recognised to be strategically significant for international collaboration and capacity building of an organization.

The term globalisation is used to describe the way in which a number of processes in economic, social, cultural and technological areas have begun to permeate all geographical regions in the world. The speed and nature of impact of these processes is uneven between different localities, depending upon the interaction between globalising tendencies and the particular configuration of local factors, such as the state of development of domestic economy or its telecoms infrastructure. Globalisation focuses more on assimilation and integration while internationalisation focuses more on the differences of various nationalities. This position is no different for high education. The internationalisation of high education is undoubtedly the most pressing challenge to the education sectors of both developed and developing countries. However, the process of higher education internationalization is different from the globalisation of the economy because the high education system were originally created by national government, most countries still operate regulatory or legal constraints on various issues, which make it more challengeable. Globalisation could be referred to as integration with differences with a traditional Chinese expression. The essence of the internationalisation of high education aims to respect the common laws of education while maintaining individual national cultures, because education is never simply to teach knowledge and develop skills, but to inherit culture and to forge personality as well.

## **2. Need of the Study**

The twenty- first century has seen an unprecedented demand for a diversification in high education, as well as increased awareness of its vital importance for socio-cultural and economic development. Addressing such challenges and opportunities, strategic Sino-UK HE collaboration has been developed since 1996. A three-year collaboration project was initiated by Wei Yu, Vice-Minister of China Ministry of Education. The speech delivered by UK Prime Minister, Tony Blair, on 18 June 1999 turned a new page with Higher Educational Institutions (HEIs) both in China and UK entering into a new academic collaboration. However, at the operational level, the negotiation and the implementation and management of collaboration project is never an easy case. However, the uncertainties and ambiguities prevalent in the Chinese business environment are neither well understood nor effectively negotiated by the international investment community. Therefore, by no means all international involvement with China has been successful. Evidence shows that many of the difficulties and disappointments are caused as a result of misunderstandings, cultural differences or

---

false assumptions, which could have been avoided or alleviated by great care from the overseas partners through appropriate management of the knowledge transfer process.

The main purpose of this paper is to argue that the way in which globalisation is beginning to affect high education is creating a crisis in developing a coherent management understanding and the establishment of strategic alliances in higher education between West and East. The distinctiveness of the research programme lies in providing strategic insights of knowledge transfer in higher education collaboration programme, with which, both the transferors and the transferees and funding agencies as well as the government decision makers can identify the essential ingredients of knowledge transfer, namely the transfer of tacit knowledge. This may enable the practitioners to address the existing deficiencies in the process of knowledge transfer and assist in the development of more appropriate arrangement for the transfer of management knowledge in theory and practice.

However, the involvement of technology and knowledge transfer as a whole in the international collaboration project could be regarded as a leverage to make the project more successful not only in international business sectors and also in high education. Knowledge transfer/ sharing has been widely recognised to be strategically significant for international collaboration. Li-Hua has addressed the appropriateness and effectiveness of technology transfer and knowledge transfer between foreign and local managers when they work together. The study had identified that without knowledge transfer, technology transfer does not take place in international joint venture projects, as knowledge is the key to control technology as a whole. Hence, knowledge transfer is crucial in the process of international collaboration projects. There is not much research done on knowledge transfer in high education. Hence, this paper describes on - going research project with the primary aim to examine the appropriateness and effectiveness of knowledge transfer between foreign and local academic faculties during collaboration.

### **3. Background of the Current Research Project**

The twenty first century has seen an unprecedented diversification in high education as importance for socio-cultural and economic development. As defined as by the General Conference of UNESCO at its 27th session (November 1993) in the recommendation on the Recognition of Studies and Qualifications, "High Education include all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of high education by the competent State authorities". High education everywhere, including China, is faced with great challenges and difficulties related to financing, equity of conditions at access into and during the course of studies, improved staff development, skills-based training, enhancement and preservation of quality in teaching, research and services, relevance of programmes, employability of graduates, establishment of efficient co-operation agreements and equitable access to the benefits of international co-operation. Addressing these challenges, Mr Zhou Yuanqing (2001), Deputy Minister of Ministry of Education, People's Republic of China, points out that China needs to strengthen its academic collaboration and exchange in high education

---

---

and study the experience and lessons in high education from the West, furthermore, to develop collaboration and exchange in teaching and scientific research, in particular, the exchange of teaching staff and students, to share and use international high quality resources so as to enhance China's high education.

As indicated by the relevant statistics and analyses, there is a big gap between the Chinese famous universities and the World Class research led university in Europe and America, in terms of original research and publication, quality of teaching staff, natural and scientific theses, ratio of Ph.D candidates and their supervisors, ratio of local students and international students, funding of scientific research and vision of internationalization, in particular, the number of Noble Price winners. The question is how to narrow this gap? With the ever increasing state economic power and the implementation of the strategy of developing the country by enhancement of science and education, China has strong commitment to make direct and indirect investment into its high education. It is anticipated that the funding invested into the famous universities will reach the level of that of the World Class universities in Europe and America in ten years time. It is clear that the gaps between the two not only lie on the hard side of high education, such as campus, library, IT facility, but also on the soft side, such as, quality of the teaching staff, natural and scientific theses, educational management expertise, vision of internationalization, international dimension. It may be noted that improving facilities and physical environment does not necessary lead to the improvement of the quality of education and management. Professor Sir Watson highlights five elements, including research; media's view; employment of graduates; infrastructure; and international postgraduate recruitment, when he addresses the concept of world-class high education and what should the world-class university pursue in the age of globalisation. It is believed that the first important thing is to have comprehensive study of the operational mechanisms of university and high education. It has been identified that the university needs four wheels in order to be in a good operation. The theory of four wheels refers to teaching, research, training and consultancy as well as international collaboration. These four wheels are organic combination, support and promote each other. The paper addresses only one wheel-the international collaboration, as an instrument for capacity building, for finding effective ways to manage high education, and for testing new or established practices in many aspects of teaching and research. It will focus on the process and appropriateness and effectiveness of knowledge transfer in Sino-UK educational projects.

#### **4. Academic Collaboration between UK and China**

British higher education, consisted of 170 institutions and renowned throughout the world for its high quality and the quality of its graduates, was transformed from an elite to a mass system between the mid-1980s and the mid-1990s. Although some universities date back almost 800 years, the majority of institutions were founded in the 19th and early 20th centuries. The ex-polytechnics, now known as the modern universities, have developed a reputation for flexibility and adaptability. Therefore, the contemporary British higher education system balances new and innovative institutions and universities with long traditions of scholarly activity and research.

---

The growth of the higher education sector in China and the number of Chinese students studying in the UK has had a significant effect on the UK HE sector. The number of Chinese students studying in the UK has risen from 2,883 in 1997/98 to 32,000 in 2002/03 (17 per cent of all international students in the UK), which contributes around £1.14 billion to the UK economy. At the same time, Chinese high education system is rapidly developing and reforming, which focuses on improving basic education and creating world-class universities. Projects 211 and 985, launched by Chinese central government, are aiming to establish a small number of elite universities and compete with the world famous universities.

## **5. Concepts of Knowledge Transfer**

Knowledge transfer is an increasingly popular term in the literature across various disciplines as researchers attempt to highlight the human aspect of knowledge management. There is often a distinction made between knowledge transfer that occurs naturally or informally, and that which takes place in more formalised routines. Knowledge transfer is about connection not collection, and that connection ultimately depends on choice made by individuals. It is worth noting that this form of transfer in particular may well be a two-way process between the transferor and the transferee.

## **6. Mechanisms and Practicalities in Knowledge Transfer**

What has become apparent is that confusions about knowledge transfer can be attributed not only to a misunderstanding of the concept, but also to the complexities of comprehending transferee's need and formulating programmes that effectively satisfy these needs. People's natural tendency is to try to transplant the work in their home culture into a new culture. These "tried and tested" skills results in destabilisation, culture shock and intolerance towards others. Hence, it is necessary to understand the basic tenet of good cross-cultural relationships. Li-Hua emphasized that knowledge transfer can not be achieved if there is a too big gap between the transfer and the transferee in terms of economic development.

The significance of global thinking has been widely promoted over the past five to ten years, yet it has not impacted on the learning of managerial skills. Cultural awareness and country briefings have been highly evaluated in the staff development plan of many enterprises. However, what is needed is a more integrated approach blending skills to recognise the cultural context when planning a strategy to build effective relationships and systems.

In any interaction, people have their personal objectives or needs that are likely to vary from situation to situation. The most common reason for people engaging in interpersonal behaviour is that they have to complete some specified tasks. People working on the same service line will need to converse with each other to get their work done. Therefore, managers in the joint ventures have to involve significant amounts of social interaction and knowledge transfer not because they want it, but they have to: once social interaction occurs, then other motivating factors will come into play.

---

---

## 7. Systematic Approach to Tacit Knowledge Transfer

Badaracco has identified that technological partnership and knowledge transfer would enable the partners to take advantage of the complementarities of each other's knowledge and expertise to achieve benefits and raise their competitiveness in the global market. Societal culture is important in affecting the efficacy of technology transfer. Knowledge is utilised and transferred through intensive and extensive interaction between group members. Co-ordination is achieved through mutual adaptation among members with common knowledge and shared implicit coding schemes accumulated through group interactions. Knowledge is generated and stored almost organically in team relationships and the mode of co-ordination is human-network based. When knowledge is tacit, its transfer is more difficult to achieve and monitor. Transfer of tacit knowledge involves intimate human interaction between the transferor and the transferee. Mustapha argues that this is especially the case in the construction industry. This type of knowledge is not amenable to systematic codification and could only be accessed and transferred through intimate social interactions.

Knowledge transfer itself has a number of components, of which explicit and tacit knowledge transfer are the most significant. There are a number of mechanisms already in place for explicit knowledge transfer. Tacit knowledge transfer is considerably more haphazard wherein knowledge transfer can falter and technology transfer can be impeded. It is known that knowledge, in particular, tacit knowledge that are the keys often to deliver and create the sustainable competitive advantage because it is this part that competitors have difficulties in replicating. However, the study suggests means by which tacit knowledge transfer could be improved. There are certain channels of tacit knowledge transfer, such as, telephonic communication, social occasions, and chance meeting at work. The transfer of tacit knowledge can be more systematised. Li-Hua highlights influencing factors, motivation and congruence of knowledge transfer. For those wishing to encourage the transfer of knowledge, it would be helpful to adopt a more systematic approach that deals with the multi-faceted aspects of knowledge transfer. Such a systematic approach would consider all available resources, constraints, relationships, motivators, influencing factors, channels and foreseeable contingencies as a part of a dynamic whole in order to arrive at the most effective and efficient means of meeting the knowledge transfer objectives. The successful implementation of knowledge transfer on a joint venture project requires an understanding of the objectives and the challenges facing the project's working environment, and requires the application of conceptual skills, relevant and adequate systems, and information technology tools and concepts.

## 8. Problems of Knowledge Transfer in High Education

UNESCO has recognized the significance of knowledge transfer and knowledge sharing in high education between developed and developing countries in order to reduce the gap. Article 15 of World Declaration, on High Education for the Twenty-first Century: Vision and Action, has established an explicit policy that high educations should 'share

---

knowledge and know how across borders and continents'. The international practice of multilingualism, faculty and students exchange programmes and institutional linkage to promote intellectual and scientific co-operation should be an integral part of all higher education systems. It further points out that the principles of international co-operation based on solidarity, recognition and mutual support, true partnership that equitably serves the interests of the partners and the value of sharing knowledge and know how across borders should govern relationships among higher education institutions in both developed and developing countries and should benefit the least developed countries in particular.

However, UNESCO has also recognized the difficulty in monitoring the result of sharing knowledge and know - how across borders and continents due to culture, politics, social and economical as well financial constraints. It has pointed out the potential of new information and communication technologies to further change the way knowledge is developed, acquired and delivered. In making use of ICT for educational purposes, particular attention should be paid to removing the grave inequalities existing in the world.

## **9. Methodological Design and Philosophical Notion of the Study**

The literature review provides a wide and extensive understanding of international high education. However, little has been done in the research area of knowledge transfer/knowledge sharing across border and continents in high education. However, it has been clear that the subsequent review of literature entitled as Internationalisation of High Education: Trends and Development since 1998, the background paper prepared by the International association of Universities in May 2003, and World Declaration on Higher Education for the Twenty first Century: Vision and Action adopted by the World Conference on Higher Education on 9th October, 1998, in terms of internationalisation of high education and knowledge transfer and knowledge sharing has made the research aims more focused. Hence, the research problems addressed in this study are:

- Is knowledge transfer in high education appropriately and effectively channelled?
- How could knowledge transfer contribute to the capacity building in high education?
- What is the motivation of international education collaboration between China and the West?

## **10. Key Assumptions**

The primary aim of the study is to identify the process of knowledge transfer when the foreign and Chinese faculties work together. Therefore the structured survey was designed and arranged both in China and in a number of universities in the West following a number of key interviews. For the identification of certain elements, which determines the international collaboration strategy of high education, the samples of study have been chosen as presented in table 1 of the interview agenda. These universities were selected because they are the dynamic actors and have the

---

representation of differences and diversity in the process of internationalisation of high education. These universities include both public and private universities, big (with 80,000 students) and small (with 500 students). The interviewees are the presidents and the vice presidents of universities. The respondents of the structured survey include students, professors, deans and presidents and vice presidents of the universities in China and in the West.

Sample name	Number of staff	Number of students	Country	Status
Ocean University of China	1000	12000	China	State owned
International University of Business and Economics	1200	15000	China	State owned
Zhengzhou University	5500	80000	China	State owned
Wuhan University	3000	55000	China	State owned
Tongji University	2500	30000	China	State owned
International University of Monaco	60	500	Monaco	Private
University of Buckingham	100	1200	UK	Private
University of Northumbria	2000	23000	UK	State owned

Table 1. Interview agenda of the study

The empirical evidence identified through the Case Study of the Xiaolangdi project (Li-Hua, 2000) has shown that tacit knowledge transfer occurs from time to time during the execution of the project between members of management dyads, composed of a foreign (F) and a local (L) element. The Case Study permitted the identification of the various dyads or management pairs of individuals who inter-react with each other as part of their managerial role. In fact these dyads are numerous, and made up of foreign-foreign (F-F), foreign-local (F-L), local-local (L-L) but for the immediate purposes of the current research, only the foreign-local (F-L) dyads are of interest. The unit of analysis of the study was various dyads or management pairs with one foreign element and one Chinese element and whose role demanded that they work together. Figure 1 represents the work patterns of dyadic interaction. However, this work pattern describes the similarity in international collaboration projects in high education and matches what happens when foreign and local faculties work together in an international collaboration projects in high education.

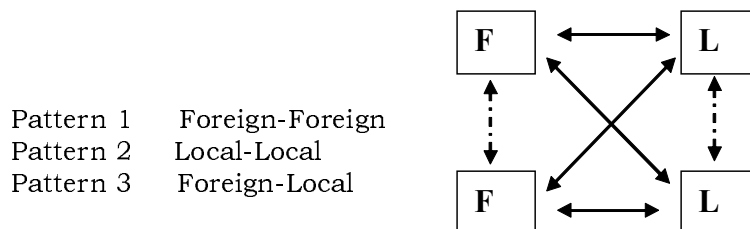


Figure 1. Work patterns of dyadic interaction



---

## 11. Aims and Objectives of the Study

The study aims to investigate how knowledge transfer contributes to the capacity building of high education and to identify the current mechanisms of knowledge transfer and knowledge sharing across borders and continents when foreign and local faculties work together on international academic collaboration projects. The objectives of the current research are:

- To review the literature both in international business and high education, which contributes to international development strategy for the tracking of the knowledge transfer process;
- To identify the factors that influence the decision- making of international academic collaboration projects;
- To evaluate the appropriateness and effectiveness of the study by interviewing decision- makers in high education followed by a structured survey.

## 12. Interpretation and Discussions of the Interview Data

This section discusses the strategic issues of international academic collaboration and summarizes the interviews with Deputy Vice Chancellors of three Western universities, including University of Northumbria, University of Buckingham and International University of Monaco and Deputy Presidents of five Chinese universities, including, Tongji University, Wuhan University, Zhengzhou University, Ocean University of China and International University of Business and Economics.

### 12.1 Perspectives of International Collaboration

Presidents from both China and West believe that internationalisation is a high priority as majority of higher education institutions of the world and universities will be benefited by international academic collaboration. However, the aims and objectives of universities between China and the West in terms of international collaboration differ because the primary strategy of undertaking collaboration projects in West universities aims to attract and recruit students while the Chinese universities aims at bringing international dimensions and the academic enhancement and increasing international competitiveness. In the meantime, Chinese universities wish to obtain knowledge transfer through international collaboration projects.

### 12.2 Challenges in High Education Funding and Financing

The analysis of the data indicates that high education both in China and UK are facing pressing challenges due to the declining public funding. It has been recognized that high education in China can still receive 70% of funding from government in principle. However, the research-led and teaching focused universities are in different positions in receiving government funding. Whereas high education institutions in the UK can only enjoy 30% of the funding from Higher Education Council for England (HEFCE) and

---

---

other funding agencies in principle. The traditional (research -led) universities receive more funding while the modern universities can generate income through proactive international collaboration activities. This perspective is in line with opinion expressed by the Chinese university presidents who attended the workshop delivered at Northumbria University on international development strategy of high education in 2004<sup>5</sup>.

### **13. Influencing Factors in Determining International Collaboration Strategy**

**International politics:** Chinese presidents have confirmed that the university's international strategy, as which country's university would be the ideal partners, was controlled by international politics. For example, there was a large number of academic collaboration projects between China and USA. However, the situation changed dramatically after September 11, 2001. As Chinese students could hardly secure entry visas into the USA, a large number of collaboration projects were suspended. One Deputy President from Chinese university confirmed that the current Chinese and UK academic partnership were threatened by the shocking visa result as well. However, the situation have been improving in the recent years.

**Pragmatic approach :** Presidents from both China and West confirmed that articulation programme between Chinese and UK universities are believed to be productive project. It has the following features:

- a. A win- win solution:
    - Educational resources will be shared by the two partners with involvement of knowledge transfer;
    - Long term strategic alliance;
    - Stable and reliable source of students;
    - International academic collaboration in teaching and research;
    - Strategic vision of becoming international university.
  - b. Chinese universities are in favour of articulation programme:
    - Avoidance of bureaucratic procedure of approval;
    - Easy to operate and manage;
    - Knowledge share and educational resources share;
    - Staff exchange.
  - c. Chinese students are in favour of articulation programme:
    - Exposure to different cultures and experiences;
    - Opportunity of being with English in the UK;
    - Significant deduction of cost;
    - Degree award by a British university.
-

However, one of the Chinese presidents pointed out that the articulation programme could not be sustainable as Chinese university lose its brand and to some extent become a student feeder to foreign universities.

In the meantime, franchising has become a popular term in high education. In comparison with articulation programme, franchising programme seems more complicated as it has to be approved by the relevant educational authorities of both partners, which takes a long time. However, once approved, the franchising programme can be sustainable. A new educational model of 'double campus' could be an alternative strategic option. Where there is real necessity to run a Sino- foreign cooperative education project by adopting the educational model of 'double campus', an administrative license shall be obtained. This new strategic model allows a complete or main teaching process for a Sino-foreign cooperative education project to be carried out within a Chinese educational institution.

#### **14. Conclusion and Policy Implication**

The UNESCO and other international organisations encouragement and the high education's tradition of promoting exchange of programme and staff across borders has resulted in advancement and contribution to society, culture and economy. Though high education from developed and developing countries may differ in some issues, there is congruence in viewing the two trends. The first trend is that high education institutions are becoming more and more internationalised. It is a growing imperative to integrate an international/intercultural dimension into teaching, research and students services in order to enhance academic excellence and the relevance of contribution to society. To some extent, high education institutions in the developing countries are more concerned with this international dimension. The second trend, more concerned with the high education institutions in the developed countries, is the growth of market driven activities, fuelled by increased demand of high education worldwide, including declining public funding in many national contexts, the diversification of high education providers, and the new method of delivery.

#### **References**

1. Berger, W. *Going Global: Implication for Communication and Leadership. Training, Industrial and Commercial Training.* 1998.
2. Dickson, T. *Globalisation and High Education: The Implications for Private Investment.* Institute of Economic affairs. 2002.
3. Dougherty, V. *Industrial and Commercial Training, Volume 31 (No 7), pp 262-266* MCB University Press, 1999.
4. Garavan, T.N. (1997) *Interpersonal Skills Training for Quality Service™, Interaction Industrial and Commercial Training Vol 29 Issues 3* 1997
5. *Internationalisation of High Education: Trends and Development since 1998,* (2003) Background paper prepared by The International Association of Universities, May 2003

6. Kogut, B., and Zander, U. (1992) "Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology". *Organisation Science*, 3,3.
7. Koizumi, T. (1982) "Absorption and Adaptation: Japanese Inventiveness In Technological Development" in Lundstedt, S.B. and Colglazier, E.W. Jr. (eds) *Managing innovation: The Social Dimensions of Creativity, Invention and Technology* New York: Pergamon, pp.190-206.
8. Lam, A. "Embedded Firms, Embedded Knowledge: Problems of Collaboration and Knowledge Transfer in Global Co-operative Ventures". *Organisation Studies*, 1997
9. Li-Hua, R. *From Technology Transfer to Knowledge Transfer: A Study of International Joint Venture Projects in China 2003*, International Association of Management Technology (IAMOT) Conference, Nancy, France, 2003.
10. Li-Hua, R. *Technology and Knowledge Transfer in China*. Ashgate Publishing Limited, 2004.
11. Liu, J. What is the gap between the Chinese universities and world class universities? *China Education News*, 2003.
12. Mustapha, F. "Factors Influencing the Effectiveness of Construction of Site Managers". *International Journal of Project Management*, Vol.16, No. 1. Elsevier Science Ltd and IPMA, 1998.
13. Opinions of the Ministry of Education of Some Issues concerning Current Sino-foreign Cooperative Education, , Ministry of Education, PRC World Declaration on High Education for the Twenty-first Century: Vision and Action, 9th October 1998, 2006.
14. Wu, Q.D. Message from President of Tongji University, Sino-French Institute of Engineering and Management, 2002.
15. Zhou, Y. Q. What should be China's High Education in the Twenty - first Century? *China Education News*, 2001.

*Note : This paper was first published in the "Journal of Technology Management in China" 2 (1), 2007*

#### **BIOGRAPHY OF AUTHOR**

**Richard Li-Hua**, PhD, is currently the Editor of *Journal of Technology Management in China* and also Founder and current President of China Association for Management of Technology . His research interests currently lies in strategy of international technology transfer and sustainable development, in particular, the effectiveness and appropriateness of technology and knowledge transfer in China. He publishes widely and advises not only international business, but also the higher education sector and government agencies. He is the author of a number of successful monographs, and is also visiting professor and invited speaker at a large number of universities in China and the West.

**Email : richard.lihua@unn.ac.uk**