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Robert Wagenaar, Arlene Gilpin
and Pablo Beneitone (ed.)

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(Editors)

2015
University of Deusto
University of Groningen

This study, conducted by the International Tuning Academy, was commissioned by the European Commission.

Website: http://tuningchina.org

Design: © LIT Images

© Deusto University Press
Apartado 1 - 48080 Bilbao
e-mail: publicaciones@deusto.es

ISBN: 978-84-15772-95-8
National book catalogue No.: BI - 726-2015

Printed in Spain

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Acknowledgments

Mutual understanding is a condition for successful cooperation. This study intends to contribute to a better understanding of the Chinese Higher Education system and its strength and weaknesses by applying the Tuning approach. It is also the successful outcome of intense cooperation between Chinese academic and European Tuning experts during one year of intensive work.

The joint feasibility study was coordinated by Xianjin Dou (Ministry of Education) for China and Robert Wagenaar (International Tuning Academy / University of Groningen, the Netherlands) for Europe. They were supported by a Management team consisting of Pablo Beneitone (International Tuning Academy / University of Deusto, Bilbao, Spain), Julia Gonzalez, Ingrid van der Meer (International Tuning Academy / University of Groningen, the Netherlands), and Hai Hong Lu (Ministry of Education of China).

In the initial stage of the project three subject areas were selected to pilot: Business Administration, Educational Sciences (Comparative Education) and Civil Engineering. Each group was coordinated by a leading Chinese university in close cooperation with two Tuning experts. For Business Administration this was Xi'an Jiao Tong University, Xi'an for which Prof. Xi Youmin acted as academic coordinator; for Education Studies (Comparative Education): Beijing Normal University, Beijing, for which Prof. Liu Baocun acted as academic coordinator, and for Civil Engineering: Tong Ji University, Shanghai, for which Prof. Huang Hongwei acted as academic coordinator. Per subject area 5 renowned Chinese universities were involved, each represented by at least one leading professor.

The European Tuning team of academic experts consisted of Dan Frost (Umea University) and Margret Schermutzki (Tuning expert, formerly University of Aachen) for Business Administration; Arlene Gilpin (Tuning expert, formerly University of Bristol) and Søren Ehlers (University of Aarhus) for Educational Sciences (Comparative Education); and Giuliano Augusti (formerly University of Rome) and Alfredo Soeiro (University of Porto) for Civil Engineering.

I take this opportunity to thank everyone mentioned in the above. Special gratitude goes to Pablo Beneitone who prepared a paper on the outcomes of the consultation of stakeholders and to Arlene Gilpin for doing major work on editing this publication and describing the state of affairs of Higher Education in China. I also thank Richard de Lavigne not only for proof reading the publication but also for coming up with very useful suggestions for the further improvement of the text, for which I take full responsibility as coordinator of the study.

The groups of Tuning and academic experts met three times during the lifespan of the study. During these meetings very intensive, lively and open discussions took place resulting in high quality reflections on the present stage of Chinese higher education and the way to approach for the future. The results of these meetings as well as all the work done in between is reflected in this publication. It shows the outcomes of the consultation process that was organized among stakeholder groups (employers, graduates, more mature student and alumni) about the relevance and importance of competencies to be developed in degree programme. It also summarizes three Tuning conceptual frameworks for the academic fields of Business Administration, Education Sciences (Comparative Education) and Civil Engineering.

The process of developing these products was a very stimulating and rewarding one. I am convinced the results will be a catalyst for making reforms in the higher education programs of these disciplines in China according to international standards which will boost their comparability and compatibility and will facilitate transparency and recognition. I hope it will also stimulate other subject areas to take up the challenge to reform their programmes as a service to society in general and future generations of students in particular. This seems the right moment to act.

Robert Wagenaar
European Coordinator EU-China Tuning Study
International Tuning Academy / University of Groningen

Executive Summary

The EU-China Tuning Study was developed by the Groningen branch of the International Tuning Academy, based in the Universities of Deusto, Spain, and Groningen, Netherlands, in close cooperation with the Ministry of Education (MoE) of the People's Republic of China.

It was initiated in the autumn of 2012 within the framework of the *EU-China High level People-to-People Dialogue* between the Government of the People's Republic of China (hereafter China) and the Commission of the European Union (EU).

The aim of the pilot study was to enable continued discussion on education policies in order to

i. strengthen the compatibility of EU and China education systems;

ii. enhance outcomes-based education;

iii. overcome obstacles to mobility;

iv. establish commonly acknowledged quality criteria; and

v. develop tools for mutual recognition.

The Study was jointly coordinated by Robert Wagenaar responsible for the EU team, and Xianjin Dou, Director of Lifelong Learning (LLL) at the MoE, responsible for the Chinese involvement. Final decisions regarding

the outline of the study were made in consultation with Unit C4 at the Directorate-General for Education and Culture (DG EAC).

The EU team consisted of 10 members in total, 6 academic experts, and 4 Tuning experts including the coordinator and project manager.

The Chinese team comprised Xianjin Dou, Hai Hong Lu, Deputy Director of LLL at the MoE, three senior academic coordinators of the subject teams, and full supporting teams of subject experts and researchers from Chinese universities. The three subject areas involved in the study were Business Administration, Civil Engineering and Educational Sciences, represented by Comparative Education. All of the universities involved belong to an elite group of Chinese universities.

The experience and expertise represented in the Subject teams, and their ability to generate back-up researchers, allowed for work to be carried out very efficiently, and much was achieved despite the very short timescale. However, the reform of higher education includes a wide spectrum of universities in China, and the subject groups might well have been strengthened by the inclusion of a few teaching universities not beneficiaries of special funding.

An important outcome of the team meetings between the groups of European and Chinese academics was the process of building trust and confidence between all involved.

The Chinese authorities have long recognised the need for reform in tertiary education —structural, curricular and pedagogical— to ensure that graduates have the knowledge and skills, which a modern economy requires, and that the system affords access to all who are qualified to participate. The main changes over the past twenty to thirty years have focussed on the structure and governance of higher education, and more recently has moved on to address the content and implementation of curricula in order to increase their relevance to China's role in the world.

There is also a clear recognition in China of the need for tertiary education to develop skills of critical inquiry, creativity, problem solving, applying knowledge in practice, communication and teamwork. The country wishes to move beyond a passive knowledge-oriented approach to a more active capability-development approach, however profound a change this may involve in terms of culture and practice.

The consultation on curricular content focused, therefore, on the competences that students should develop during a programme of study, both generic competences (graduate skills), that all university graduates should demonstrate, and subject specific competences relevant to their specialized subject. This was achieved by all three groups. The work produced interesting results in all groups, stimulating discussion about the nature of student learning, curricular content and teaching, and the needs of employers. It provides a very solid basis for further work.

All of the groups found that knowledge-based competences were highly regarded by all groups of respondents and deemed to be well achieved, an unsurprising outcome given the emphasis on knowledge acquisition in the present curricula, reflected in most current ways of teaching and testing.

The work carried out in this study, however, shows that in China, as in other countries, employers want educational institutions to seek to improve the skill-set of graduates; to recognize the importance of soft skills such as teamwork and communication; to refocus assessment, teaching-learning processes, and curricula away from lower-order thinking skills, such as remembering and understanding, towards higher-order skills such as analysing and solving problems, as well as creativity; and interact more with future employers to understand the particular demand for skills in the region and sector.

There is a large degree of compatibility between the systems of higher education in the EU and China. The increasing number of joint operations, one of which was a participant in this study, attests to that. Chinese and EU universities are broadly similar in that they represent different emphases, some emphasizing research and some teaching; degrees are similarly structured in three cycles.

However, there are some significant differences. EU degrees normally demand a greater intensity of student workload studying the principle subject, even at undergraduate level. Elective courses are available in European universities, both within the general subject area, and outside it, but these normally represent a small percentage of the total credits, whereas in China compulsory additional courses outside the main subject area demand a considerable time input in the first year.

Whereas Europe has one credit system that all countries follow, based on student workload and not on contact hours, China has no such unified national credit system.

One of the strengths that emerged from the study was the robustness of the quality assurance framework in China. Procedures are in place to thoroughly scrutinize higher education provision at institutional and programme levels, although the lack of an overarching qualifications framework must weaken the objectivity of the processes. There is also evidence in China that Quality Enhancement occurs, e.g. teaching committees discuss the results of the Quality Assurance procedures, but there was no detail about how this information is used.

This study shows that there is already a good foundation of similarities on which to work on mutual recognition. Some structures are similar; informal recognition undoubtedly already exists given the numbers of joint projects in higher education; the quality assurance systems are broadly compatible.

It will require more in-depth study and a wider approach to develop the tools for efficient and secure mutual recognition. Two key tools are required: the development of a student workload and learning outcomes based credit system and a Chinese Qualifications Framework for higher education.

In conclusion, the challenges China has to face in transferring from a teaching to a learning-based approach and the necessity of moving to a more transparent system were fully understood and supported. The Study has clearly highlighted the relevance of the Tuning tools as a means for reform towards a Learning Outcomes based approach.

It is recommended that a small working group of Chinese and EU academics and others be convened to make recommendations about the development of a Qualifications Framework and a workload based credit system. This work would link quality assurance, quality enhancement and programme design and implementation to locate Chinese higher education more transparently within international settings.

This could be linked to a larger scale Tuning project involving a wider range of universities and subject areas in which a more comprehensive survey of competences could be linked to course design and the alignment of teaching methods, learning activities and assessment techniques. Tuning's ability to draw expertise from many countries, all with relations with China, further strengthens its suitability for the task.

1

Introduction

The EU-China Tuning Study was developed by the Groningen branch of the International Tuning Academy, based in the Universities of Deusto, Bilbao, Spain, and Groningen, Netherlands, in close cooperation with the Ministry of Education (MoE) of the People's Republic of China.

It was initiated in the autumn of 2012 within the framework of the *EU-China High level People-to-People Dialogue* between the Government of the People's Republic of China (hereafter China) and the European Commission who have decided to intensify their cooperation by launching an joint EU-China "Tuning" study to reduce barriers between the higher education systems of China and those in the EU. The aim of the study is to enable continued discussion on education policies in order to

i. strengthen the compatibility of EU and China education systems;

ii. enhance outcomes-based education;

iii. overcome obstacles to mobility;

iv. establish commonly acknowledged quality criteria; and

v. develop tools for mutual recognition.

The study ran from 2012 to 2014, and the two parties are now assessing the results and exploring the possibility of launching a second phase starting in 2015 or 2016. The initiative was further endorsed

during the 16th China EU summit in late 2013 when it was agreed to continue dialogue on education policy, notably in the framework of the Higher Education Platform for Cooperation and Exchanges, and to strengthen the compatibility of the higher education systems of the EU and China, via "Tuning China" and other initiatives.

The study was based on extensive research of the literature by the EU team, meetings between the overall Coordinators of the Project, and seminars in both China and the EU involving the three disciplinary areas chosen: Business Administration, Civil Engineering, and Comparative Education, each area coordinated by the Universities of Xi'an Jiaotong, Tongji and Beijing Normal respectively.

The current study is only one example of collaboration between the EU and China in the context of higher education. A further example began in July 2013 when a new Erasmus Mundus Action 3 project was selected for funding by the European Commission, representing an EU-China collaboration aimed at enhancing the visibility of European Higher education and strengthening the dialogue and cooperation with Chinese stakeholders in the field of doctoral education. This three-year project will be carried out from 1 October 2013 to 30 September 2016.

This publication is based on the research carried out by the EU team, a paper by Beneitone et al (2013), the final report of the study prepared by the EU coordinating team and the reports produced by the three subject area groups on completion of their work.

2

Reform of Higher Education in China

As the President of China recently said *'One can hardly understand China well without a proper understanding of China's history, culture, the Chinese people's way of thinking and the profound changes taking place in China today'*. (Speech in The Hague, 2014) This overview of the reform of higher education is a very brief introduction to the road of development that China has consistently followed for many years.

The Chinese authorities have long recognized the need for reform in tertiary education —structural, curricular and pedagogical— to ensure that graduates have the knowledge and skills that a modern economy requires; and that the system affords access to all who are qualified to participate. The main changes over the past twenty to thirty years have focussed on the structure and governance of higher education, and more recently has moved on to address the content and implementation of curricula in order to increase their relevance to China's role in the world.

Some of the reforms undertaken to provide access to higher education and develop the economy have been on a massive scale and have resulted in rapid change. For instance, one structural reform in the late 1990s resulted in the merging of around 700 higher education institutions, to create 300 post-merger institutions. In 2001 alone there were 91 cases of mergers.

Some other central ministries, e.g., the Ministry of Agriculture, the Ministry of Industry and Information Technology, the Ministry of Transport, the Ministry of Water Resources, the State Forestry Administration, China Meteorological Administration, etc., also co-

sponsored some 100 universities and colleges together with provincial governments.

Another example is that when the Chinese government decided to greatly expand access to higher education in 1999, in the same year the intake of new students increased by 47.4% from the previous year. Such rapid expansion must create stress on both material and human resources. The gross enrolment rate in China has now risen to around 30% of the relevant age group, and it is planned to steadily increase this by 2020.

Articles 9 and 7 of the Higher Education Law of the People's Republic of China enshrine the rights of access and the need for the state to restructure the system to accommodate the nation's needs. 'Citizens shall, in accordance with law, enjoy the right to receive higher education', (Article 9) ; and *'In light of the needs of the socialist modernisation drive and of development of a socialist market economy, the State, on the basis of the different types and levels of the existing higher education institutions, advances the restructuring of higher education and the reform of teaching in higher education institutions, and optimizes the structure of higher education and the distribution of resources, in order to improve the quality, and to increase the efficiency of higher education'* (Article 7).

The higher education sector in China is large – very large indeed in terms of student numbers, and large in terms of the numbers of institutions. In 2014, China had 2542 colleges and universities (not including independent colleges). Of these, 2246 were regular colleges and universities (including 444 non-public ones), and 296 were colleges and universities for adults (including one non-public one). Unlike India, for example, where there are huge numbers of small university colleges affiliated to universities, the average size of institutions in China is fairly substantial – 5000+.

Broadly speaking, there are three types of institutions of higher education. One is the group of national, semi-national, and local academic universities that were included in Project 211, as well as a few dozen traditional local universities founded prior to the higher education expansion of the late 1990s. These may be designated teaching and research universities, and research universities. There are approximately 4 to 500 of these in total, and they provide a comprehensive selection of programmers in the established disciplines

and professions. They are academic, have an international outlook, support intensive research, and are highly respected at home and overseas. These universities provide Bachelors, Masters and Doctoral qualifications.

Other universities focus mainly on teaching, and while they may provide a comprehensive range of academic subjects, many award only Bachelor's degrees, although a few may be permitted to award Master's degrees in certain specialisms. (Permission for this seems to be easing in recent years). Any research that is conducted tends to be applied research.

The third group of tertiary institutions comprises Advanced Vocational Institutions that award tertiary level vocational diplomas and certificates. The pyramidal diagram below illustrates this (Jin 2012) but perhaps suggests a hierarchy that is irrelevant to the whole economy of a state. While the vocational institutions are located at the bottom of the pyramid, this should be taken to represent number rather than importance.

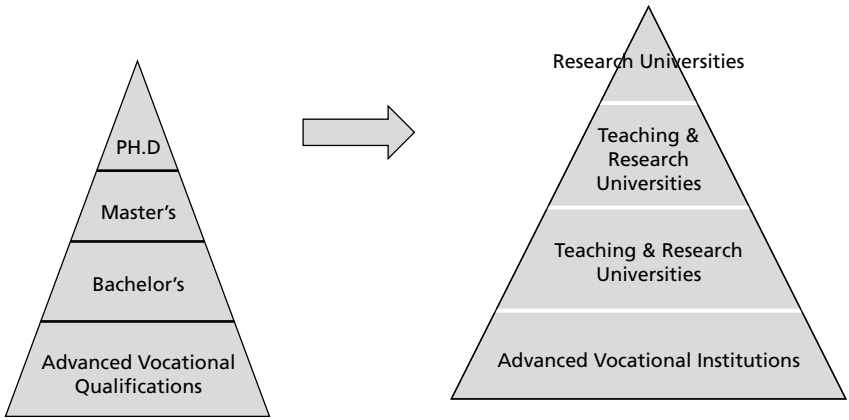


Diagram taken from Guizhen Jin, 2009; Centre of Educational Research, Beijing Institute of Technology (BIT).

Figure 2.1
Qualifications offered by …

That being said, there *are* 'elite' research universities in China. Project 211, mentioned above, launched in 1996 by the Ministry of Education

of China, was an initiative concentrating key resources to raise the research standards and disciplinary strengths of a number of already prestigious universities. During the first phase of this project, from 1996 to 2000, approximately US$2.2 billion was distributed among selected schools. China today has 117 universities designated Project 211 institutions, which are largely national universities, as well as some veteran local universities. These universities have the responsibility of educating four-fifths of all doctoral students, and two-thirds of all postgraduate students. They offer 85 per cent of the country's key subjects, hold 96 per cent of the state's key laboratories, and utilize 70 per cent of research funding.

Later on, Project 985 allocated even larger amounts of funding to a more selected group of universities in order to build centres of research excellence. Currently this supports 39 universities in total (which are all national universities, and included in Project 211). (Qiang Zha and Chuanyi Wang, 2014).

No data are available about the funding of the rest of the universities and other higher education institutions. However, in the 2012 U21 Ranking of National HE Systems China was very near the bottom of the rankings in relation to provision of resources. (Williams et al. (2012).

It has been suggested that China may adopt a dual track selection of university entrants, one for academic-focused universities, and the other for applied-type institutions. One system would comprise academic universities; the other would consist of the new universities, higher vocational colleges and private institutions, incorporating close to 2,000 universities and colleges that are local and teaching and service oriented.

The MoE is planning to convert around a further 600 local universities into institutions of applied arts and technology, some of which already exist and are very successful. For instance, in Anhui province in central China, 16 universities (of 33 located in the province) supported by the MoE formed a consortium in 2008, helping one another to absorb the ideas, experiences and functions of the German *Fachhochschulen* into their own operations, and meet the needs of local and regional economies through the development of programmes and curricula that are more responsive to, and interactive with, local economic and social development. Given this species of institution is new to higher education policy makers and practitioners in China, this alliance serves

as a hub for drawing on the European experience, and exploring the niche for this type of institution on Chinese soil.

Now a consensus has been formed among these newly founded universities at local level, that they should indeed follow an alternative path to academic-oriented universities, and focus on curricular and programme offerings in areas of applied arts and technology. They see this path as the solution to addressing their deficiency in competitiveness in attracting students and Chinese higher education would then have two parallel systems.

A recent OECD report noted that *'It is important that educational authorities and TEIs engage more directly with employers of graduates, in identifying changing job requirements and monitoring employers' expectations of graduates and their satisfaction with those they have employed. There is also a need for a more systematic and comprehensive approach to the provision of labour market information to guide student choice. Surveys of graduate destinations would be more informative if they were undertaken six or nine months after graduation rather than (currently) after three months*.' (OECD 2012)

There is also a clear recognition in China of the need for tertiary education to develop skills of critical inquiry, creativity, problem solving, communication and team work. They wish to move beyond a passive knowledge-oriented approach to a more active capability-development approach, however profound a change this may involve in terms of culture and practice.

The structural reforms and expansion of higher education represent the implementation of what is now enshrined in article 5 of the Education Law of China which states that '*the task of higher education is to train people to become senior specialists imbued with the spirit of creativeness and the ability to practice, to develop science, technology and culture and to promote the socialist modernisation drive*'. The moves under the projects 211 and 265 to decentralize universities appears to have been reversed in recent times, with more control now being exerted by central government.

The Higher Education Innovative Capacity Improvement Scheme, or the 211 Project, was started in order to speed up the establishment of China as an innovative country generating high quality and relevant research outcomes, using collaborative partnerships as the

key mechanism. The programme seeks to generate commercially applicable, independent innovation and research, as well as supporting the development of a research workforce. Chinese universities will be asked to form Collaborative Innovative Bodies that include industry, research institutes, and leading foreign universities and research institutes. It is understood that Collaborative Innovative Bodies can then apply for funding to become Collaborative Innovation Centres.

This focus on collaboration is significant. 80 per cent of countries' research impact is explained through their collaboration rate, i.e. the higher the international research collaboration rate, the higher the impact of the research output. Recent research has confirmed that informal networks of acquaintance between academics are often responsible for initiating joint research projects. This places a premium on cultural and physical links between people, cities and countries. (British Council, 2012)

However, the creation of access, the stimulation of teaching and research institutions capable of competing on the world stage, although vital, has not been enough, nor can it be in the drive to educate a new generation in the creative skills noted above. Institutions, however notable, who concentrate their best efforts on developing research may lose sight of the need to link this to teaching practices. There is a need to encourage innovation and creativity more widely, not only horizontally but also vertically within institutions.

2.1. Curriculum Structure

The academic year runs from September until June and consists of two 20-week semesters.

In this outline, *programme* refers to the complete curriculum leading to the award of a degree, and *course* refers to the different units that make up the programme.

Higher education programmes are divided by the Chinese government into 13 categories: 01 philosophy, 02 economics, 03 law, 04 Education, 05 literature, 06 history, 07 natural sciences, 08 technology, 09 agriculture, 10 medical sciences, 11 military affairs, 12 management. 13 art science. Each of the 13 categories contains specialisations which

in turn have their own subcategories. Examples of this are seen in the three participant disciplines.

The curriculum structure for programmes in China is made up of three basic elements: subject specialisation courses, subject elective courses, and obligatory common courses. The common courses are obligatory for all students on all programmes. While there will be slight variations in the credit weight of these common courses, in one example from a Masters course of 35 credits in total, they accounted for 7-9 credits. The obligatory courses are Understanding Chinese Society (3 credits) and Foreign language courses (4 credits), typically English, Russian or Japanese. Students may also take one optional common courses, either in IT or another foreign language course (1 or 2 credits respectively). Students then take their discipline related specialist and elective courses to make up the total required credits. Although a dissertation or thesis may be obligatory for graduation at Bachelor's and Master's levels, this does not necessarily carry any credits.

The system seems to have slight variations between different disciplines and levels in higher education institutions. In the Bachelor more than one-third of the credits are devoted to the general curriculum. In the Master this is around a quarter to a third. More detailed information can be found in the reports of Business Administration and Comparative Education.

The common courses for undergraduate and all postgraduate students have similar content; it was suggested that they may be very similar in level. One of the problems this curriculum structure presents is the overall management of content and competences. The common courses are not the concern of the academic staff teaching the specialist subject, and so consultations on matters of programme design do not take place.

Nevertheless this common element is of great importance to the central administration in China. Citing a joint directive from the State Council and the General Office of the Communist Party's Central Committee, *Xinhua* reported that improving ideological and propaganda work was a "major and pressing strategic task" on campus. (University World News January 2015). It might actually increase their effectiveness if the staff responsible for offering these courses were to work with other programme staff in discussing the competences and learning outcomes of the programme as a whole, including the common courses.

There is a further issue. Although degree programmes are longer in China than in Europe —four years for the Bachelor and two to three years for the Master's— the intensity of learning dedicated to the development of knowledge and competences relevant to the subject area appears to be lower. The last year of both cycles is dominated by preparing for the next entrance examination for those wishing to continue studying, or for finding employment. According to the Chinese academics in the study the real workload of both Bachelor and Master programmes requires probably 50% of the time scheduled.

2.2. Credit System

As yet, China has not established a national Qualifications Framework. Neither are national qualifications referenced to an overarching framework.

There is no *national* credit system, meaning that the number of credits required for the completion of a Bachelor's programme of four years or a Master's programme of two to three years can vary greatly between institutions. It is common to assign one credit for every 16 to 18 hours of contact.

One example from a participant university is that of Beijing Normal University, where credits are said to measure student workload, but where in practice the calculation is based on contact hours. Thus a course with 16 to 18 hours of lectures corresponds to one credit point. Of course, besides the lectures the students are required to read course materials, write papers, do tests and examinations, and so on, but the time spent in these activities is not specified in the credit system. The Master's thesis, although compulsory for the award of the qualification, is not credit bearing.

The lack of a reliable credit system is a weak element in the present Chinese higher education system, particularly relevant for recognition of studies in an international perspective, and for inward and outward student mobility. The Chinese participants in the study also concluded that it would be very useful to study the development of a student workload and outcomes based credit system. Such a system could also serve as a means to reform and enhance degree programmes.

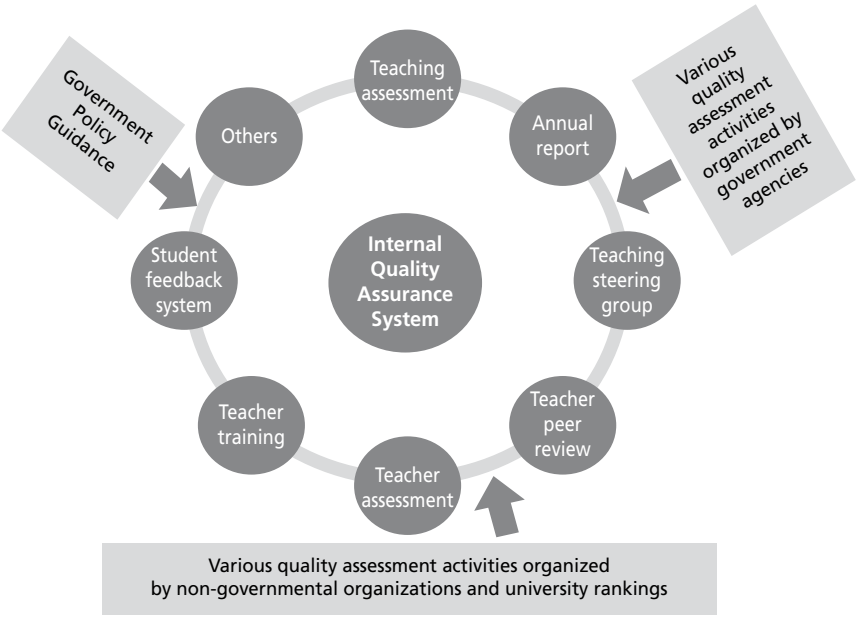
2.3. Quality Assurance and Enhancement

China has a robust quality assurance system at both national and institutional levels. All higher-education institutions must be accredited by the Ministry of Education. The Academic Degree Committee of the China State Council (the chief administrative authority in China) accredits all higher-education programmes and determines whether they are of sufficient quality to be eligible to the right to award a Bachelor, Master or Doctorate degree or other qualifications. Higher education institutions are formally assessed every 5 years in a standardized and systematic way. A database is maintained in which the data of the higher education institutions concerning infrastructure, facilities, etc. are publicly accessible. Evaluation at programme level is undertaken at institutional level, in cooperation, where appropriate, with professional organisations.

At course level, student evaluations are important. It is obligatory for students to evaluate (anonymously) each course and the teacher of each course. Access to registration for courses of the following semester is only possible when the student has evaluated all the courses s/he has already taken. The outcomes of the evaluations are part of a university information system that is accessible not only by students and teachers, but also by planners of the university. Students can look at the evaluations of teachers, of courses and they have a two-week period at the beginning of each semester in which they can switch to another teacher of the same course.

If a course or the teacher is not well evaluated, this affects the promotion for teachers for a period up to 3 years. Good evaluations will increase chances for promotion. Teachers are mentored and a teacher training centre is available to teachers to improve their teaching. All academic staff, including for instance the Vice President and other high-ranking staff of the university, have an obligation to teach at least 34 hours per year to undergraduates.

There is little mention of how this internal procedure feeds into programme review, except in one case where it was said to feed into a teaching committee.



Taken from the Comparative Education Report.

Figure 2.2
The quality assurance system of higher education in China

The emphasis on careful adherence to national procedures may be influenced by the administrative staff in universities, some of whom will have been appointed to play an influential role in supporting university Presidents in line with the requirements of the Education Law: '*In higher education institutions run by the State, … Presidents take overall responsibility under the leadership of the primary committees of the Communist Party of China. Such committees shall, in accordance with the Constitution of the Chinese Communist Party and relevant regulations, exercise unified leadership over the work of the institutions and support the presidents in exercising their functions and powers independently and responsibly.* (Article 39) This support covers all of the activities of the university from governance to student learning.

2.4. Future Reforms: entering the Spirit of the System

This very brief overview has demonstrated how far higher educational reform has already proceeded in China. The reforms to date have been at material and institutional layers; However, the current moves towards a student-centred approach may be challenging, since they touch what on what Gu Minyuan (1998) refers to as the spiritual layer: the very essence of the system, the hearts of the teachers, the minds of the parents. A leading Chinese specialist in Comparative Education, he suggested that education traditions comprise the three layers of the material, the institutional and the spiritual. The material layer refers to the material and technical basis for higher education; the institutional layer implies the system and structures of higher education; the spiritual layer consists of educational ideas, attitudes, and values. Cai (2012) also commented on this in saying '*I also see that one intrinsic problem in China's internationalisation of higher education in its inclination to a traditional reform philosophy: zhong ti xi yong, meaning to preserve the Chinese essence while adopting Western means*'.

Change at this inner level can be challenging indeed. This has been witnessed in many countries, at all levels of the education system, and is still being witnessed even where reforms towards a student-centred approach have apparently been implemented.

In a centrally managed system such as that in China there can be stern encouragement provided to help make such a change (c.f. the 'iron hand' of the Quality Assurance Agency in the UK in the 1990s) and kindly support (c.f. the support that China has already provided in terms of providing teaching Centres in some universities). It has to be recognized, however, that reform at this level takes time, but can be facilitated by the use of an approach such as Tuning which consultatively creates a forum for work and discussion that enables understanding and, especially, a sense of ownership of the reform.

3

Tuning and Educational Reforms: *Cooperative Development of Higher Education*

During the past thirty years higher education in all continents has undergone considerable change, partly in response partly to a growing need for access, partly from increasing demands from employers for greater clarity with regard to what students have achieved, and partly as a consequence of trends in globalisation and internationalisation.

'*Globalization, a key reality in the 21st century, has already profoundly influenced higher education. We define globalization as the reality shaped by an increasingly integrated world economy, new information and communications technology (ICT), the emergence of an international knowledge network, the role of the English language, and other forces beyond the control of academic institutions. Internationalization is defined as the variety of policies and programs that universities and governments implement to respond to globalization. These typically include sending students to study abroad, setting up a branch campus overseas, or engaging in some type of inter-institutional partnerships'* (Altbach et al, 2009).

This was the motivation informing, in 1999, the Bologna Declaration in Europe which sought common European answers to problems across all countries in the Union. A driving force was the need to develop strategies to foster student and worker mobility through the recognition and compatibility of qualifications within and between countries, a force which is now global.

There was —and is— a recognition that in spite of their valuable differences, higher education systems faced common internal and external challenges related to the growth and diversification of higher education, the employability of graduates, the shortage of skills in key areas against a backdrop of the need to continue economic expansion and consolidation, the expansion of private and transnational education, the need to further encourage staff and student mobility, and, in the longer term, the desire to attract the best scholars from around the world in order to be leaders in different areas of research. The reforms required cover all areas of higher education; this was true in Europe, and is true in China today.

Tuning Educational Structures (Tuning) was developed as a universities based structure, in which academics worked together in international discipline or subject based groups to consider the best ways in which the Bologna reforms and aspirations could best be implemented. Tuning may have been initiated as a response to reform in one continent, but the methodology developed has since been used in many countries and continents where reform of higher education has been undertaken, where governments perceived as useful a model of reform that encouraged participation from all levels of academics, which provided links with the world of work, and had authenticity in terms of the spirit of education in the country.

Some of the contexts have been challenging in size (e.g. the continents of Europe, Latin America and Africa), others have had challenges of complexity, tradition, lack of resource, language – to mention only a few. In all cases the richness of diversity has been a positive motivation for the work achieved. A spirit of sharing, listening to each other, respecting other ways of doing, and a willingness to understand, informed all Tuning projects large or small, and is the underlying reason for their success.

Tuning can no longer be considered to be exclusively European. Successive groups of academics from many countries have enriched what Tuning now offers, which is a universal *approach* to assist in the implementation of higher educational reform both at the macro-level of entire institutions and at the micro-level of individual disciplines or subject areas, programmes and even courses.

Essentially what has evolved is an approach consisting of a *philosophy of respect,* as noted above, a *methodology* and *tools*, adaptable to different contexts, to (re)design, develop, implement and evaluate

study programmes for each cycle (Bachelor's, Master's and doctoral, and sub-cycles within these, such as diplomas and certificates).

3.1. The Tuning Approach

The Tuning approach is adaptable to any context in higher education where curriculum reform —in its broadest sense— is undertaken. It has four important elements, all of which were rehearsed in the study in China.

- First, the central participation of a range of actors from the context where the reform is to take place —academics, employers, students, professional bodies, officials— who are engaged in constructive and guided debate on key issues. This inclusive openness is vital if a reform is to be understood, owned and disseminated.

- Secondly, the method is systematic; it proceeds from programme initiation to quality assurance, and can be used for any part of the reforms that an institution or nation is undertaking. Each stage has well established and tested 'tools' to facilitate discussion and action in context.

- Thirdly, respecting the wide diversity of higher education is central to Tuning. Tuning does provide tools and the 'know how' for using them, but does not seek to restrict the independence and creativity of academic and subject specialists, or undermine local and national academic authority. "A national system of education is a living thing, the outcome of forgotten struggles and differences and 'battles long ago'. It has in it some of the secret workings of national life." (McQuire 2010) Tuning does not address the systemic considerations of governments, but through it academics can and do influence government policy making from below, and where working groups of senior officials exist, a Tuning project can effect this from within.

- Fourthly —and not the least important— Tuning helps to develop a common discourse, cross-cultural and cross institutional (even cross departmental) that enables mutually understanding and trust, that permit open debate and reflection to take place about the directions of higher education at institutional level. In China this would involve administrators, who have responsibilities aligned to student learning, as well as academic staff.

The work in the vast majority of projects is undertaken by teams of academics, based on subject areas or disciplines, drawn from a representative sample of universities in the country(ies) participating. In some contexts, for example in Latin America and Africa, there are policy support groups formed from representatives of government and others, which consider how to resolve and implement strategic issues that cannot be resolved by academics alone. The two groups follow parallel paths, although their remit is different; this parallel working has proved to be valuable in providing a forum of communication between different levels of stakeholders in higher education, facilitating greater understanding on both sides. Given the role of administrators in Chinese universities it would be important to adopt such a structure in any future project to enable this important cohort of staff to be fully in dialogue with the academic staff during the project.

In this study in China, the groups undertook part of the stages of work for the academic groups in a project which are *normally*

1. identifying relevant generic and subject specific competences through consultation with a range of key stakeholders, including employers;

2. exchanging good practices in approaches and techniques in teaching, learning and assessment;

3. exploring how a mutually agreed cumulative credit system can facilitate student mobility and the learning accounts of part-time and interrupted students; and

4. exploring how quality assurance and enhancement frameworks and procedures can be used at programme level to further enhance student learning.

Because of time constraints in what was a pilot study all stages were addressed, but as the results show, the three subject groups placed greater emphasis in areas they considered important to them.

The first stage looks at *programme design*: what content, competences and intended learning outcomes are appropriate at each level. This involves consultation with employers, officials,

professional bodies, academics and students – former and current. Increased access to good quality education and training does not automatically lead to better economic outcomes for a country. Skills development above all has to be relevant to the current and future needs of the economy. The relevance of curricula to local and national needs can be opaque to academic staff wholly engrossed in the academic quality of their programmes. One element in creating relevant education programmes, and hence helping to result in better employment opportunities for graduates, is the awareness by academic staff of the demands for skills and competences among workers and employers.

The second stage examines how *teaching, learning and assessment* are best designed and practised in order for students to achieve the intended learning outcomes. This is a stage where academics work together within the project but also within their own institutions, sharing good practices within and across subject boundaries. Students are also useful participants here. An important element at this stage is constituted by the ways of assessing student achievement for progression or graduation, in relation to overarching Qualifications Frameworks (QFs) if available, which set out level descriptors for each degree level and (ideally) each level within a degree.

The third stage examines *credits, and in particular the relationship between these and student workload*. There is no one 'right' way of allocating credits or calculating workload, but in the interests of national and international student mobility there are now guiding principles that need to be taken into consideration.

Finally, the last stage is *quality assurance and enhancement.* Quality assurance procedures are guarantors of the standards of the learning environment, while quality enhancement practices are essentially internal and are aimed at the continuous improvement or evidence based endorsement of what takes place within programmes and institutions.

3.2. Other Tuning Work

Tuning has also provided a valuable platform for developing common reference points, descriptors or standards —as part of conceptual frameworks— at sectoral level as well as subject area or disciplinary

level. Frameworks have been developed for the *sectors* of Engineering, Social Sciences, Humanities and Creative and Performing Arts. The *subject areas* for which conceptual frameworks have been developed in Europe are: chemistry, physics, mathematics, earth sciences, medicine, nursing, occupational therapy, social work, history, art history, linguistics, literary studies, law, music, performing arts, creative arts, architecture, Education Sciences including Teacher Education, business administration, psychology, sociology, different types of engineering and area studies and gender studies (the last two being examples of interdisciplinary studies). Other regions in the world covered the same and other subject areas (http://tuningacademy.org/subject-areas/). All of the work achieved has been supported by wide stakeholder consultation, from employers, graduates, students and academic staff.

Frameworks are relevant for making programmes of study comparable and transparent in national as well as international contexts. They are based on identified and agreed learning outcomes and competences, distinguishing between generic or transversal and subject-specific ones. Tuning has had considerable experience of working with groups of academics and others who wished to align professional practice in universities with Qualifications Frameworks, and in working with the groups who formulate the Frameworks at tertiary level. The conceptual frameworks developed through Tuning are aligned to and compatible with many Qualifications Frameworks in the world.

The Tuning methodology has been of interest in many parts of the world, has been peer reviewed, and is subject to impact research. Projects and feasibility studies have been implemented —in addition to in Europe— in Latin America, Georgia, the Baltic countries, Central Asia, Russia, the United States of America, Africa, Australia, Canada, the Middle East and North Africa (MENA). Furthermore, institutions and organizations in other geographical regions have shown interest in using the Tuning methodology; for example, some important higher education institutions in Japan have taken the initiative to study and implement the Tuning approach.

The OECD Secretariat, at the invitation of the Assessment of Higher Education Learning Outcomes (AHELO) Group of international Experts, in 2009 contracted the Tuning Academy to undertake initial development work on learning outcomes to be used for valid and reliable assessment of engineering and economics students from diverse institutions and countries.

Finally, Tuning projects are perfect networking nuclei, not only with colleagues from different institutions, but with research networks nationally and internationally. The Tuning Academy encourages research through grants and publications, and the extensive 'Tuning family' provides a worldwide network. It is this networking aspect that makes participation in Tuning personally valuable for participants as well as being professionally enriching, and as noted above, the most powerful researchers are those who are well networked.

Tuning thus offers not only a flexible and very adaptable methodology for assisting educational reform at tertiary level, but has a proven track record of success in diverse situations, all of them complex.

4

Structure of the Study

4.1. Participants

The study was jointly coordinated by Robert Wagenaar responsible for the EU team, and Xianjin Dou, Director of Lifelong Learning (LLL) at the MoE, responsible for the Chinese involvement. Final decisions regarding the outline of the study were made in consultation with Unit C4 at the Directorate-General for Education and Culture (DG EAC). The EU team consisted of 10 members in total, 6 academic experts, and 4 Tuning experts including the coordinator and study manager. The Chinese team comprised Xianjin Dou, Hai Hong Lu, Deputy Director of LLL at the MoE, three senior academic coordinators of the subject teams, and full supporting teams of subject experts and researchers from Chinese universities. The three subject areas to be involved in the study were Business Administration, Civil Engineering and Educational Science, represented by Comparative Education. The participants in these groups are described in section 5.

4.2. Responsibilities

In practice the EU team prepared the agenda and intended content of the working seminars of the subject groups and offered the necessary background information to facilitate smooth implementation of the study, while the Chinese teams did the work of implementation.

European members of the study were responsible for:

- Bringing together an appropriate group of Tuning experts (in consultation with the Chinese authorities regarding the topics identified);

- Researching relevant background about the higher education sector in China;
- Designing the seminars;
- Establishing a Tuning China website in consultation with the Chinese co-chairs of the sectoral /subject area groups.

Both EU and Chinese authorities and partners undertook the:

- Fine-tuning of the study;
- Selection of the subject areas to be involved;
- Selection of locations for the seminars;
- Setting-up and implementation of the consultation surveys among stakeholders; identification of stakeholders;
- Preparation of a report on shared quality enhancement and assurance mechanism and identification and development of tools / mechanisms for recognition of (part of) studies.

Chinese members of the study were responsible for:

- Selecting the higher education institutions and academics to be involved;
- Selecting coordinators of the subject area groups;
- Managing the logistics of the seminars at the locations selected;
- Carrying out the consultation and China based work projects;
- Preparing subject area reports on their findings (in consultation with EU experts).

4.3. Processes

It was agreed that the normal Tuning procedure should be followed, fast tracked as far as possible because of the short duration of the pilot study. Thus, the first task was to develop the lists of competences, both generic (graduate competences) and subject specific that seemed appropriate for Chinese higher education. The lists were prepared by

the subject groups, and discussed with subject relevant colleagues. These formed the basis of a wide questionnaire-based consultation with employers, academics, graduates, and existing students to verify the relevance and importance of the competences, but also to consult about the perceived level of their achievement in graduates of programmes. The initial information on relevant competences allowed the development of a generic programme profile, or meta-profile for the subject area. This was achieved by two of the three groups. Work on Teaching Learning and Assessment and on quality Assurance and Enhancement was done through academic consultation among the teams and their peers.

5

The Three Subject Areas Participating in the Project

All of the universities involved were drawn from the elite group of Chinese research and teaching universities, and indeed, most of them had been beneficiaries under reform and development schemes such as 211 and 268. Such universities have excellent materials and outstanding human resources, and can attract first class students. Business Administration and Civil Engineering focused their work on undergraduate (Bachelors) level programmes, while Educational Sciences focused on postgraduate (Masters) level programmes in Comparative Education.

The experience and expertise of the teams, and their ability to have back-up research teams, allowed the work to be carried out very efficiently, and much to be achieved despite the very short timescale. However, the reform of higher education includes a wider spectrum of universities in China, and the subject groups might have been strengthened by the inclusion of a few teaching universities not beneficiaries of special funding.

5.1. Business Administration

5.1.1. *Members of the Subject Group*

The universities represented in the subject group were Xi'an Jiaotong University (the coordinating institution), Tianjin University, Dongbei University of Finance and Economics, Sun Yat Sen University, and Xi'an Jiaotong-Liverpool University.

The Chinese members of the group were Professors Youmin Xi (Chief Scientist) and Wei Sun (Coordinator); Professors Fubin Sun, Xinhong Wang, Xiaotao Yao, Wei Zhang, Xuhui Wang, Xuhui Wang, Yongli Wang, Xin Yu, Sarah Dixon, Qin Su, and Gengshu Lu. There were also two invited experts from China, Professor Yingluo Wang, Academician of the Chinese Academy of Engineering, and Professor Huaizu Li.

Dan Frost and Margret Schermutzki were the European advisers to the group.

5.1.2. *The Subject Area in Brief*

Business Administration belongs to the discipline category of Management Science. Many universities now offer programmes in this sub-discipline, having set up schools or departments of business education designated School of Management, School of Economics and Management, School of Business, International School of Business, etc.

Business administration in general includes Accounting, Corporate Management (including Financial Management, Marketing, and Human Resources Management), Tourist Management and Technology Economy and Management. However, Business Administration is multidisciplinary, which means that research in Business Administration involves sociology, psychology, politics, law, etc. Meanwhile it also has features of inter-disciplinarity e.g. with medicine, engineering, Education, science and technology, society, etc.

The actual degree programmes in Business Administration at undergraduate level are as follows:

First Cycle (Bachelor)	Accounting, Finance Management, Business Administration.
	Marketing, Human Resource Management, Tourism Management, Technology Economics and Management.
	Industry Engineering, Logistic Management, Information Systems, E-Commerce, Management Science, Economics.

Sources: Discipline Categories by the Ministry of Education (2012 Edition.

In the second cycle, Masters, there are eight academic and six professional degree programmes within Management Science. Business

Administration falls mainly within the professional programmes, but a number of the academic programmes are also relevant to those advanced students who wish to pursue an academic career.

Second Cycle (Master)	*Professional degrees:* Business Administration Enterprise Management (including Marketing, Human Resource Management, Strategic Management, Organization Management, etc.). Accounting and Finance Management, Tourist Management, Technology Economics and Management. *Academic degrees*: Management Science and Engineering Industry Engineering (including. Logistic Management, Project Management, Engineering Management, etc.). Information Systems and Information Management, E-Commerce, Management Science.

At present, universities in China only offer academic Doctoral degrees in Management. The DBA programme (Doctor of Business Administration), a professional degree, has not yet been undertaken in China.

Third Cycle (Doctorate)	Business Administration. Management Science and Engineering.

5.1.3. *Enrolment in Business Administration*

For almost all the universities in China, students are recruited through the national entrance examination which is organized by the provincial governments. According to the statistic from the MOE, undergraduate numbers in Management doubled between 2004 and 2012 from 316,111 to 686,779. Graduate numbers for Masters and doctoral degrees also showed a dramatic increase, from 31,444 to 73,428 for Masters degrees, and a tenfold increase from 453 to 4723 in the case of doctoral enrolments.

5.1.4. *Occupations of Graduates in Business Administration*

Surveys of occupational choices used by the team showed relatively little difference in chosen occupations between Bachelor and Master degree graduates, although there may have been a difference of level of employment.

Bachelor graduates: These work in commercial enterprises, service enterprises and government departments and colleges and universities. However, most of them choose employment in commercial enterprises, including the financial sector, manufacturing industries, IT industries, trade, etc. They choose HR management, marketing, administration, accounting, audit, planning, and management consulting as their occupations.

Master graduates: They also work in commercial enterprises, service enterprises and government departments and colleges and universities. However, their preference for work in government, college and universities is higher than undergraduates. Their choices include the financial sector, manufacturing industries, government departments and Colleges and Universities, IT industries, trade, etc. It is noteworthy that Master graduates can work as administrative staff in colleges and universities but not as academic staff because of their lower degree. Their occupation level is mainly management level.

China is a nation with rich human resources. In the labour market demand far exceeds supply for graduates of Business Administration. This demand has a consequence on the enrolment and teaching in different majors.

5.2. Civil Engineering

5.2.1. *Members of the Subject Group*

Civil Engineering was represented by Tongji University (the coordinating institution), Chongqing University, Harbin Institute of Technology, Tsinghua University and Xi'an University of Architecture and Technology. The principal members of the subject group were Prof. Huang Hongwei (Coordinator); Chinese academic experts: Professors Li Zhengliang, Lu Dagang, Ma Zhiliang, Shi Qingxuan, Ye Weimin; and EU advisers, Professors Alfredo Soeiro and Giuliano Augusti. Supporting

members of the subject group were Associate Professors Zhao Cheng, Feng Peng, Chen Jian, and Zhu Lihua; Drs Ren Rui, and Wang Wan; Shen Jiajun, Zhang Xiangrong, and Su Xiaojuan.

The European members of the group were Giuliano Augusti and Alfredo Soeiro.

5.2.2. *The Subject Area in Brief*

Civil Engineering falls within the category of Technology in the MoE catalogue of disciplines, and is a subject with academic and practical programmes. It is a professional engineering discipline that deals with the design, construction, and maintenance of the physical and naturally built environment, including works like roads, bridges, canals, dams, and buildings. Civil Engineering is so defined in order to distinguish non-military engineering from military engineering.

The core theoretical categories in the curriculum are mechanics, civil engineering, and water conservancy. Courses in this include engineering mechanics, fluid mechanics, rock mechanics, groundwork and foundation, engineering geology, engineering hydrology, technical drawing, computer applications, construction materials, concrete structure, steel structure, engineering structure, water supply and drainage engineering, and construction technology and management.

The undergraduate programme also covers technical drawing, engineering surveying, computer application, professional experiments, structure design, and construction practice. Students' capability for engineering planning, design, construction, management and related research work are provided in the following disciplines: construction engineering, transportation civil engineering, water conservancy and hydropower engineering, port engineering, coastal engineering and water supply and drainage.

The practical content includes technical drawing, acquaintance practice, measurement practice, engineering geological practice, professional practice or production practice, curriculum required structure design, graduation design, and graduation thesis. There are forty weeks during the programme for practice.

5.2.3. *Enrolment in Civil Engineering*

No details are given in the Subject area report. It outlines the requirements of what students are intended to learn, as in the previous paragraph, but there is nothing about selection to enter programmes.

5.2.4. *Occupations of Graduates*

Over the years, institutions of Civil Engineering in China have educated a large number of well-trained and innovative graduates at all levels. As the mainstays of civil engineering construction, these graduates have not only played an important role in China's rapid economic development but also made outstanding contributions to the field of Civil Engineering.

Civil engineering undergraduates are mainly engaged in construction enterprises, design institutes, real estate and other related industries. Postgraduates prioritise design institutes and real estate companies. The majority of Doctoral graduates enter careers in universities or research institutes.

5.3. Comparative Education

5.3.1. *Members of the Subject Group*

The universities represented were the Institutes of International and Comparative Education, Educational Management, Teacher Education, Higher Education, and Preschool Education, all within Beijing Normal University (the coordinating institution); the Graduate School of Education, Peking University; Institute of Education, Tsinghua University; the School of Education, Minzu University of China; the School of Education, Renmin University of China; and the Institute of Higher Education, Beijing University of Technology. The research was supported by the North East Normal University, South West University, East China Normal University, South China Normal University, and Shaanxi Normal University.

The Chinese members of the subject group were Professor Liu Baocun, (Coordinator); Professors Wang Yingjie, Gu Xianlin, Zhu Xudong, Yu

Kai, Teng Jun, Chang Yongcai, Hong Chengwen, Huo Liyan, and Shi Xiaoguang; Associate Professors Gao Yimin, Li Jiayong, Liu Qiang, Zhang Donghui, Wang Zhanrui and Wang Xiaoyang. Consulting group members were Professors Zhang Dewei, Chen Shijian, Peng Zhengmei, Ke Seng, Shi Yudan and Yuan Liping. Research support was provided by Ms. Sun Ying, and Messrs Ding Ruichang, You Zheng and Xia Peiyuan.

The European members of the group were Søren Ehlers and Arlene Gilpin.

5.3.2. *The Subject Area in Brief*

Comparative Education is one of ten sub-disciplines of Education in the Chinese Official Discipline Catalogue issued by the Ministry of Education (MOE).

Chinese Comparative Education studies introduce and analyse the latest trends of educational development in other countries and international communities, in order to discuss issues in Chinese education from an international and comparative perspective. It has developed four sub-fields: foreign education, international education, developmental education and comparative education.

It is an advanced study field, only MA and PhD programmes are provided. Although currently 91 universities are qualified to provide MA programmes in Comparative Education and 24 Ph.D. programmes, in practice, only about 30 universities have developed MA programmes and about 10 Ph.D. programmes.

Different universities offer degree programmes aligned to their research areas and the number of their faculty members. The Institute of International and Comparative Education (IICE) at Beijing Normal University is the largest research institute in Chinese Comparative Education, and the only national centre for Chinese Comparative Education research. It offers a typical, but diverse range of advanced degree programmes, including: (1) Chinese MA programme in Comparative Education; (2) Chinese PhD. programme in Comparative Education; (3) International MA Programme in Comparative Education (Educational Leadership and Policy); (4) International PhD Programme in Comparative Education (Educational Leadership and Policy).

A Chinese PhD programme in Comparative Education is committed to assist the students to deeply understand educational theories, features of different countries and regions, as well as trends of international education development; and to develop their capacity of critically analyse global experience and solve the local educational problems based on comparative educational researches with an open and diverse mind.

5.3.3. *Enrolment in Comparative Education*

There are two routes into graduate programmes in Comparative Education: either by passing the National Graduate Entrance Examination, or by recommendation, in which case their GPA would be within the top 10%. All students are interviewed. Generally speaking, only one in ten applicants is successful. One feature of students in this programme is that they are proficient in one or two foreign languages, since some of them are foreign language graduates.

5.3.4. *Occupations of Graduates*

In general, there are seven typical occupations for Master graduates in this subject area:

1. civil servant working in a municipal or national government office, some of their work is related to international exchange and cooperation of education, while some of it is not, but still in the field of Education;

2. support staff in universities or business companies, they might take administrative posts either in the international affairs sector or in other administrative sectors;

3. school teacher in primary and secondary schools, some of them will take advantage of their English language skills to become English teachers, but not exclusively, some of them will serve for the sector of international exchange and cooperation in schools;

4. staff in education agencies, which include various education training agencies, education societies, consultation companies and non-government education organizations;

5. editorial staff in publishing companies, newspapers, journal and magazines;

6. research staff in the few local education research institutions;

7. entrepreneurship to promote international exchange and cooperation in the field of Education among different countries.

Graduates with Doctoral degrees in Comparative Education would be likely to pursue academic careers either universities or research institutions, in order to continue conducting international and comparative educational research. However, some doctoral graduates choose to join the Civil Service, or provide consultation for both domestic and international education organizations or start their own educational businesses.

6

Analysis of the Consultation

According to the Tuning approach, as explained in 3.1, a consultation took place of four stakeholder groups — academics, graduates, students and employers — regarding the relevance of generic and subject specific competences for the academic fields involved in Chinese context. In this framework the three subject area groups agreed a common list of 33 generic competences. Furthermore, each of the groups drew-up its own list of subject specific competences. These lists were converted into questionnaires, asking to *rate* the importance of each competence listed for work in the profession as well as the level of achievement resulting from the university degree involved according to the experience/opinion of the consulted; both on a scale from 4 (strong) to 1 (not relevant / not achieved).

As a control mechanism the respondents were also asked to *rank* the five most important competences, both generic and subject specific.

For analyzing the data the system of cluster sampling was applied.

The list of generic competences is the following (English version):

1. Capacity for analysis and synthesis
2. Capacity for applying knowledge in practice
3. Planning and time management
4. Basic general knowledge in the field of study
5. Grounding in basic knowledge of the profession in practice
6. Oral and written communication in the native language

7. Capacity to communicate with a second language
8. Computing skills
9. Research skills
10. Capacity to learn actively,
11. Information management skills
12. Critical and self-critical abilities
13. Capacity to adapt to new situations
14. Capacity for generating new ideas
15. Problem solving
16. Decision-making
17. Teamwork
18. Interpersonal skills
19. Leadership
20. Ability to work in an interdisciplinary team
21. Ability to communicate with non-experts in the field
22. Appreciation and understanding of culture diversity
23. Ability to work in an international context
24. Commitment to health and safety
25. Ability to work autonomously
26. Project design and management
27. Initiative and entrepreneurial spirit
28. Ethical commitment and professional attitude
29. Social responsibility and civic awareness
30. Concern for quality
31. Will to succeed
32. Environment awareness and commitment to sustainable development
33. Ability for self-management

The procedure established by Tuning met with acceptance in China. The three subject area groups collected more than 1,740 questionnaires focused on generic competences and 1600 related to subject specific competences.

There is evidence of high rates of correlation among the four groups of stakeholders consulted (academics, graduates, students and employers) with regard to the 33 competences, both in terms of importance, and the level of achievement.

All groups consulted considered the 33 established competences important, awarding the majority of them *ratings* of over 3, on a scale in which 3 is equivalent to Moderate. This validates the list agreed by Chinese experts within the project.

Lower scores were given for level of achievement, indicating a good level of criticism and demand among those surveyed. In most of the competences considered to be very important by the four groups, there are significant gaps when compared to the perceived level of achievement. It will be crucial in the future to review the areas that this study has shown to be relevant for the different groups and, where nonetheless there is a perception of a lack of achievement.

In addition to generic competences each degree programme also sought to develop competences that are more specific to the particular subject area. Each of the three subject areas in the Tuning China Project engaged in vigorous discussion in order to reach agreement on the competences for their area (Beneitone et al 2013).

All three lists of subject specific competences will require more work to refine them, but they were a useful first list to seek the views of a range of stakeholders.

6.1. Business Administration

The consultation in Business Administration was the same as the other discipline groups: by means of questionnaires four groups of respondents (academics, existing students, employers and graduates) evaluated the importance and achievement of lists of generic and subject specific competences. Each subject group used the same list of generic competences in their consultation.

6.1.1. *List of Subject-specific Competences*

1. Ability to analyse & structure an enterprise problem + design solution (e.g. entering a new market)
2. Audit an organization and design consultancy plans
3. Apply and transfer business knowledge to the work environment and provide practical solutions
4. Identify and operate adequate software
5. Identify & use adequate tools (e.g. market research, statistical analysis, comparative ratios)
6. Identify the constitutional characteristics of an organization
7. Business communication ability
8. Identify the functional areas of an organization and their relations
9. Identify impact of macro & microeconomic elements on business organizations
10. Learning to learn (how, when, where new personal developments are needed)
11. Ability to suggest solutions to and adapt to change
12. Ability to apply business and managerial concepts in different organizational settings
13. Use university knowledge to identify impact of different cultures on business
14. Understand details of business functions, size, sectors & link with theories
15. Understand and apply existent & new technology & its impact for new / future markets
16. Understand principles of engineering & link them with business
17. Demonstrate awareness and understanding of ethical standards for business organizations
18. Understand principles of law and link them with business / management
19. Understand the principles of psychology, identify implications for organizations

20. Understand and use bookkeeping and financial systems
21. Written and oral communication in a foreign language
22. Ability to conduct a business environment analysis using suitable instruments
23. Work assignments abroad (e.g. work experience for 20 weeks)
24. Business negotiation ability
25. Identify the cultural difference and cross-cultural communication in commercial activity
26. Ability to identify and act upon opportunities in the business environment

6.1.2. *Basic Statistics of the Consulting Survey*

The total number of questionnaires received from all 5 universities exceeded the minimum number the EU experts required (480) and met the minimum requirements for data analysis. No breakdown of the respondents was given in their report.

Content of Questionnaire	Generic Competences	Subject-Specific Competences
Number of respondents	552	543

6.1.3. *Rating of Importance and Achievement by the Four Groups of Respondents*

1. All four groups of respondents consulted rated 23 out of 33 *Generic* Competences higher than 3. In contrast the *rating* for achievement by all four groups was between 2 and 3, i.e. low to moderate.

2. The largest gap between competence and achievement were found in "Ethical commitment and professional attitude (28)", "Social responsibility and civic awareness (29)", "Problem solving (15)", "Leadership (19)", and "Capacity for applying knowledge in practice (2)".

3. In two competences the respondents agreed that there was a smaller gap between importance and achievement: "Basic general knowledge in the field of study (4)" and "Computing skills (8)".

With regard to the *specific* competences

1. The four groups agreed that most subject-specific competences are important; of the 26 competences, more than 20 scored more than 3.

2. Again, all four groups agreed that achievement was lower than importance, with scores of between 2 and 3.

3. There was agreement between all groups about which subject specific competences have the largest gap between importance and achievement. This is the case for competences… "Ability to analyse & structure an enterprise problem + design solution" (1), "Ability to identify and act upon opportunities in the business environment" (26), "Business communication ability"(7), and "Business negotiation ability" (24).

4. Achievement in three competences was *rated* as high as or higher than importance by all groups. These were "identify and operate adequate software" (4), "understand principles of engineering and link them with business" (16) and "written and oral communication in a foreign language" (21).

The four groups consulted agreed on six *most important* **Generic** Competences:

1. Capacity for analysis and synthesis
2. Capacity for applying knowledge in practice
10. Capacity to learn actively
18. Interpersonal skills
15. Problem solving
3. Planning and time management

The most interesting result in the *ranking* of importance was where graduates (now working) and employers differed from academics and students. Most significantly 'interpersonal skills', and 'teamwork' were much more highly *rated* from the workplace. 'Applying Knowledge in practice', which may seem more significant to those embedded in knowledge acquisition did not have the same importance to those working, possibly because it is embedded in everyday life. It is also worth noting the importance given to the 'will to succeed' by employers and workers, a finding consistent with research done in other countries.

The five most important subject specific competences were *rated*

1. Ability to analyse and structure an enterprise problem + design solution
3. Apply and transfer business knowledge to the work environment and provide practical solutions
2. Audit organization and design consultancy plans
7. Business communication ability
26. Ability to identity and act upon opportunities in the business environment.

Four of these were also *ranked* as the most important by the four groups:

1 Ability to analyse and structure an enterprise problem + design solution

7 Business communication ability

3 Apply and transfer business knowledge to the work environment and provide practical solutions

10 Learning to learn (how, where new personal developments are needed)

26 Ability to identity and act upon opportunities in the business environment

However, employers, students and graduates *rated* as more important than did academics "Business negotiation ability (24)" and "Understand

details and apply existing 'new technology' its impact for new/future markets (15)".

6.2. Civil Engineering

The Engineers made an unusual contribution to Tuning when they undertook to reanalyse all of their data. This did not in fact lead to any dramatic differences in the interpretation of the responses, but the approach was interesting. For the purposes of this report the original Tuning analysis data has been used.

6.2.1. *List of Subject-specific Competences*

1. Broad knowledge of the essential features and development of the civil engineering industry, and properties of common construction materials of civil engineering;
2. Awareness of responsibility of civil engineering in society;
3. Ability to do original research on civil engineering independently;
4. Ability to use the modern techniques and information tools in engineering practice;
5. Ability for organizing and coordinating civil engineering projects;
6. Ability to communicate, collaborate and conduct engineering design/construction/management;
7. Comprehensive ability and leadership on civil engineering project management;
8. Sense of innovation in civil engineering;
9. Ability to define, determine and implement a strategy for solving a civil engineering problem and to produce a substantial report or thesis;
10. Ability to deal with engineering accidents and engineering risk management;
11. Ability to apply the principles and methods of mechanics;
12. Ability on the application of basic performance of engineering materials;
13. Ability to Master and apply the fundamental principles of structure analysis;

14. Ability to deal with general problems in construction and to do so independently;
15. Knowledge for applying information technology in civil engineering (e.g. engineering software);
16. Ability to design and conduct experiments, investigations, and data analysis in civil engineering;
17. Ability to apply the knowledge of engineering geology to solving problems during the design and construction process;
18. Ability to apply the basic principles and methods to foundation design/construction;
19. Ability to apply the life-cycle design concept on engineering projects;
20. Capacity for observing and understanding engineering practices' impact on the environment;
21. Knowledge of the working principle of common engineering equipment and its development trends;
22. Ability to apply laws and regulations to engineering construction management;
23. Skills relevant to major employment sectors in civil engineering;
24. Ability to read specialist literature in English or another foreign language;
25. Understanding the basic knowledge of relevant major, such as transportation planning, urban planning, water supply and drainage, architectural equipment and building electricity;
26. Civil engineering expressive ability, such as graphing;
27. Capacity of conceptual design in civil engineering.

6.2.2. *Basic Statistics of the Consulting Survey*

More than 1,800 China-EU Joint Tuning Study questionnaires were issued by mail, e-mail and network questionnaire (dedicated website). 1,041 valid questionnaires were collected, containing 550 generic competence questionnaires (134 questionnaires from academics, 109 from employers, 184 from students, 123 from graduates), and 491

specific competence questionnaires (108 questionnaires from academics, 98 from employers, 166 from students, 119 from graduates), and more than the number of effective samples (400) to meet the minimum requirements for data analysis.

Content of Questionnaire	Generic Competences	Subject-Specific Competences
Number of respondents	491	550

6.2.3. *Rating of Importance and Achievement by the Four Groups of Respondents*

Although, as stated already above, the Civil Engineers conducted an interesting analysis of their questionnaire data, but in this report, in the interests of consistency, the Tuning statistical analysis has been used.

While students and graduates rated 20 or more of the competences at higher than three, (i.e. important) both academics and employers rated just over half of them (16) at this level. This could suggest that further debate is needed within the Civil Engineering group and their employer stakeholders in order to revise the list of competences.

With regard to achievement, many competences were *rated* over 3. In comparison with other subject areas this is notable. Six competences were considered highly achieved by all 4 groups consulted:

11) Ability to apply the principles and methods of mechanics

13) Ability to apply the fundamental principles of structure analysis

26) Ability to express for Civil Engineering (this competence seems to have lost something in translation: Knowledge and ability to use the discourse of engineering?)

1) Broad knowledge of essential features, processes, history and materials of CE

12) Ability on the application of the basic performance of engineering materials

16) Ability to design experiments and conduct experiments, investigations, and data analysis in CE,

In all five competences the employers *rated* achievement more highly than any of the other groups of respondents. Overall, employers were more positive about the achievement of students, as were the students themselves. The academics were the least positive in their *rating* of achievement.

The four groups agreed on two common subject specific competences among the least achieved:

- (21) Knowledge of the working principle of common engineering equipment and its development trends

- (19) Ability to apply the life-cycle design concept on engineering project.

Employers rated *(22), the Ability to use laws and regulations to implement engineering construction management* higher in importance than other respondents, and also lower in achievement. This may be another point on which further consultation needs to be undertaken between academics and working employers.

There was no agreement between the groups about which were *ranked* among the top 5. The graduates agreed with the academics and employers, in including *Ability to communicate, collaborate and conduct engineering design/construction/ management* among the five most important competences while the students *ranked* this competence much lower. Among academics, students and graduates, *Ability to apply the principles and methods of mechanics* scored highest while employers *ranked* it much lower.

The agreement on which competences had the least importance was also substantial. In one competence, however, there was a noteworthy difference between academics and employers: ability to use laws and regulations to implement engineering construction management. The employers ranked this as an important competence, which they saw as only moderately achieved, while the academics *ranked* it in the last three in terms of importance.

6.3. Comparative Education

In Comparative Education Beijing Normal University took the lead in the consultation process with active (i.e. present at meetings) partners

from Beijing University and Beijing University of Technology. To avoid 'metropolitan bias' they had a number of partners from regional universities who helped to ensure a spread of respondents in the consultation.

6.3.1. *List of Subject Specific Competences*

1. Awareness of an appropriate range of theories and methodologies of Education, and the ability to describe them appropriately
2. Awareness of an appropriate range of theories and methodologies of Comparative Education, and the ability to describe them appropriately
3. The ability to identify potential connections among educational theories, educational policies, and educational practices
4. The ability to compare and contrast education systems in different countries
5. The ability to analyse current educational thought
6. The ability to relate educational policies and trends in different countries to the socio-economic and cultural contexts
7. The ability to use theories and methodologies from other disciplines to enable the student to theorize in the field of Comparative Education
8. The ability to understand and critically analyse commonality and diversity of educational development in different countries and regions of the world
9. The ability to reflect on the nature, roles and underlying agendas of international organizations
10. The ability to conduct international academic exchange and cross-cultural communication
11. The ability to undertake cross-disciplinary and cross-cultural educational research from international perspectives
12. The ability to provide policy consultation and services for international organizations, governments, and various educational institutions
13. The ability to learn from international experiences to design and implement educational practices in local contexts

14. The ability to adopt appropriate comparative approaches to solve problems in educational theory and practice
15. The ability to design, implement, and evaluate educational or developmental projects based on evidence and data obtained from comparative studies
16. The ability to apply theories and methods of pedagogy to inform effective teaching
17. The ability to lead and coordinate a multidisciplinary or multicultural team
18. The ability to apply ICT in educational research, project and knowledge management, and independent study
19. Commitment to analyse international experiences consciously and critically, making contributions to national educational development and reform
20. Awareness and application of internationalisation and localisation of education
21. An open mind to rich and diverse educational practices, and respect for the unique characteristics of education and culture in different countries and regions
22. Understanding and appreciation of the social values of the profession, and commitment to professional ethics

6.3.2. *Basic Statistics of the Consulting Survey*

The Comparative Education group collected 1214 valid responses. They had a positive response from employers, given the range of employment that graduates can undertake: 230 responded to the Generic Competences questionnaire, and 196 to that of Specific Competences. Academics were the lowest category of respondents with 66 and 61 respondents.

Content of Questionnaire	Generic Competences	Subject-Specific Competences
Number of respondents	647	567

6.3.3. *Rating of Importance and Achievement by the Four Groups of Respondents*

All except five of the *generic* competences were *rated* at more than 3 in importance, indicating that they were considered to be moderately to highly important. Of particular importance to students were the ''capacity to learn actively'', ''capacity for analysis and synthesis'', ''problem solving'' and ''capacity for applying knowledge in practice''.

Only five of the *generic* competences were *rated* lower than 3 in terms of importance: 8) Computing skills, 19) Leadership and 21) Ability to communicate with non-experts in the field (by all four groups), and 20) Ability to work in an interdisciplinary team (by employers), 32) Environment awareness and commitment to sustainable development (by academics).

In contrast to the high *ratings* given to the importance of the generic competences, no *rating* for achievement exceeded 2.9, and the gap between importance and achievement was marked. The four groups considered the achievement in 'basic general knowledge in the field of study', ''oral and written communication in your native language'' to be the highest; while that in ''initiative and entrepreneurial spirit'' to be the lowest of the 33 competences surveyed. The academics indicated the gap between the two as 'huge' (quoted from the CE report) especially in ''problem solving'', ''initiative and entrepreneurial spirit'', ''capacity for applying knowledge in practice'', ''capacity for generating new ideas'', and ''capacity to adapt to new situations''. Employers also indicated a large gap in the following competences ''capacity for applying knowledge in practice'', ''initiative and entrepreneurial spirit'', ''problem solving'', ''ability of self-management'', and ''capacity for generating new ideas''. The students and graduates gave similar responses.

Only one of the *subject specific* competences was *rated* lower than 3 in importance; indeed, the *ratings* were very high by all groups for all competences except 'The ability to reflect on the nature, roles and underlying agendas of international organizations'. The four groups considered ''an open mind to rich and diverse educational practices'', and ''respect for the unique characteristics of education and culture in different countries and regions'' are the most important; and ''the ability to provide policy consultation and services for international organizations, governments, and various educational institutions'' and''

the ability to reflect on the nature, roles and underlying agendas of international organizations'' are the least important.

The four groups agreed the highest achievement is for the ''awareness of an appropriate range of theories and methodologies of Education, and the ability to describe them appropriately'', ''an open mind to rich and diverse educational practices, and respect for the unique characteristics of education and culture in different countries and regions'', "understanding and appreciation of the social values of the profession, and commitment to professional ethics''. On the other hand, their achievement in ''the ability to reflect on the nature, roles and underlying agendas of international organizations'', ''the ability to use theories and methodologies from other disciplines to enable the student to theorize in the field of Comparative Education'', ''the ability to provide policy consultation and services for international organizations, governments, and various educational institutions'', and ''the ability to lead and coordinate a multidisciplinary or multicultural team'' had the largest gaps between importance and achievement. All four groups took the view that ''the ability to learn from international experiences to design and implement educational practices in local contexts" has the biggest gap between importance and proficiency. The group also discussed the implications of these results and considered where emphases in teaching and learning might be refocused.

The *Rating and Ranking* of both sets of competences were congruent.

7

Meta Profiling

The concept of a meta-profile is that is a template which captures the core and optional elements that can be applied across a discipline to design different specialisms. The very core of being an educator, engineer, nurse etc. remains the same, but programmes can emphasise different aspects of this depending on the intended outcomes. The task of developing a meta-profile is not one that can be completed in a short pilot study, but the groups made a promising start that can be built on in the future.

7.1. Business Administration

The deep discussion carried out among the experts from 5 top Chinese universities and EU experts resulted in the selection of the competences that all students of a business degree at undergraduate or Masters level are expected to meet or exceed. These competences were evaluated by other stakeholders. These competences provide the basis for a meta-profile for the design of degrees in Business Administration which shows the inter-relationship between global perspectives, self-development, interpersonal skills, business knowledge and skills and professional and application skills. Discussion considered the use of the meta profile for programme design for different specialisms, and also the levels of achievement for Bachelors and Masters programmes. However, this discussion requires further depth in future work.

Meta Profile for Business

	First Level (Undergraduate)	Second Level (Master)
Self-development (GC 1, 3, 10, 12, 13, 14, 25, 31, 33, SC 10)	...reflect on own performance and identify learning opportunities ...demonstrate organizational skills and self-improvement.	...to learn actively and autonomously ...determine self-evaluation and self-improvement
Global perspective (GC 22, 23, SC 23, 25)	...identify and be aware of cultural differences and the impact on people and business activities	...adapt the cultural difference ...develop the cross-cultural communication and work
Interpersonal skills (GC 6, 7, 17, 18, 20, 21, SSC 7, 8, 19, 21, 24)	...interact sensitively and effectively with people from various backgrounds and experiences	....Justified work environment ability to work in a team Effectively communication with people in different context
Social values (GC 24, 28, 29, 30, 32, SC 17)	...have an overview of the interaction between business and society ...demonstrate civic awareness ...develop and support ethical and good practice.	...understand the interaction between business and society ...develop social responsibility awareness and good practice.
Business knowledge & skills (GC 2, 4, 8, 9, 11, SC 5, 12, 13, 15, 16, 20, 22)	...understand the principle, culture and background ...demonstrate basic general knowledge in the business ...reflect business skills and abilities to solve the business problems	...ability to integrate and criticise business knowledge and skills.
Professional/ applications skills (GC 5, 15, 16, 19, 26, 27, 5, SC 1, 2, 3, 6, 9, 11, 14, 18, 26)	...identify and solve business problems using appropriate methods ...demonstrate and apply business analysis tools and exercise leadership in decision making ...understand the dynamic of the business environment and work effectively within its constraints.	...Combine business capability and knowledge to solve problems in business field.

Note: **GC** means Generic Competence, and **SC** means Subject-specific Competence.

7.2. Civil Engineering

The Subject group of Civil Engineering did not present a meta-profile of the subject as such. They described the situation as it is now; however, they also categorised the generic and subject specific competences they designed, but did not present a meta profile.

Current programmes appear to have three components. 1) Knowledge acquisition: Students of Civil Engineering are required to acquire basic theories and knowledge about engineering mechanics, geotechnical engineering, structural engineering, municipal engineering, water supply and drainage engineering, and water conservancy engineering. 2) A basic training programme covering technical drawing, engineering surveying, computer applications, professional experiments, structural design, and construction practice. 3) A practice element: the practice framework includes technical drawing, acquaintance practice, measurement practice, engineering geological practice, professional practice or production practice, curriculum required structure design, graduation design, and a graduation thesis. Forty weeks are arranged for practice.

They categorized the generic and subject specific competences as follows:

Categories for Generic Competences	Categories for Subject Specific Competences
Learning and comprehension ability (G1)	Capacity for instrumental knowledge (S1)
Analysis and application ability (G2)	Capacity for professional knowledge (S2)
Speculation and innovation ability (G3)	Capacity for systematic knowledge (S3)
Communication and cooperation ability (G4)	Capacity for analysis and innovation in professional area (S4)
Organization and management ability (G5)	Capacity for cooperation and organization in real civil engineering projects (S5)
Personal qualities and social responsibility ability (G6)	

It would have been interesting to see how they can combine the two categorisations to produce a meta-profile based on both their competences and the existing profile they presented.

7.3. Comparative Education

The Comparative Education group developed a meta-profile with three main categories. What was interesting in their work was that they showed how the whole of the Master's programme, including all specialisms, could be included within this meta-profile: the National Common courses; the core Education courses; the main Comparative Education courses; and the elective Education courses; and the thesis. The inclusion of the thesis in the meta-profile application was an unusual but very important step. The section on this in their final report is of particular interest and merit.

Knowledge

- to understand the basic components and main modern educational theories and ideological trends;
- to Master the educational background of different countries and regions as well as the principles of Comparative Education.

Skills

- to use scientific methods to conduct research on the education in countries and regions, compare their differences and similarities, and grasp the role and future directions of educational reform and development worldwide;
- to analyse educational issues from an international perspective;
- to have international educational exchange and discourse.

Attitudes and values

- To critically analyse global experiences and contribute to their nation's educational reform and development;
- to learn about the diversity and richness of worldwide education with an open mind, and respect the uniqueness in education and culture of different countries and regions;
- to develop a passion for teaching, and understand the importance of the academic profession, especially that of Comparative Education research.

8

Learning, Teaching and Assessment

It became clear that approaches to teaching, learning and assessment are still rather traditionally teacher centred and knowledge transmission oriented in China. One reason for this is the way subject teaching is organized, often in large classes (as is the case in many countries particularly at undergraduate level). Staff shortages in some universities may also be a factor. One also has to take into account the culture of learning in a country where knowledge is honoured by society in general, c.f. India where a similar culture prevails.

Nevertheless, as the reports from the three subject groups show, in the elite universities at any rate there is now a focus on applying knowledge as well as acquiring it. The government has also endorsed the need to focus on the quality of teaching and learning by funding teaching centres in many elite universities.

The Business Administration group made a very insightful observation with regard to assessment. 'In general in Chinese universities assessment is largely done using paper-based tests and written study reports. The assessment method is largely decided by lecturers who use oral or written methods to evaluate student capacities and award grades. Normally the lecturer or module leader is the only assessor. Students are often given little or no feedback throughout the course nor do they obtain opportunities to communicate or exchange ideas with the lecturer about their performance.

This individualised assessment done solely by the lecturer concerned leaves much room for improvement. One effective method is that of standardisation, that is, all the course assessments have clear and

standardised evaluation methods, and the evaluation and viva-voce process of the postgraduate student's dissertation assessment also have clear standards. Currently, the construction of evaluation system is relatively weak, and the use of formative assessment methods with their incentive function for students has not been implemented.

As a matter of fact, while lecturers may have strong academic backgrounds and ability to teach students, and may even devise interesting ways of encouraging student learning, their theoretical and practical skills in developing sound and effective assessment is often lacking.

8.1. Business Administration

Nowadays, in Business administration there is a balance between theoretical teaching in which students must master the knowledge base, and empirical teaching in which this knowledge is applied. Clearly, the methods of teaching chosen will reflect these twin needs. Methods potentially available include lectures, seminars, tutorials, exercise classes, workshops, problem-solving sessions, laboratory teaching, demonstration classes, placements or other forms of work based practice, case studies, simulations and problem based learning (PBL).

8.1.1. *Teaching Methods*

The use of empirical teaching methods is increasing. Academics teaching at Masters level universities in China are working to enhance case study teaching and are developing local business cases. Another empirical method is that of Business simulation which uses a simulated environment or simulation software to provide student opportunities to resolve real management problems in a virtual setting. These can enhance the competences of students in dealing with real questions, and have been widely applied all around China.

Some universities are not only focusing on developing domestic case studies and simulation design and practice, but are also focusing on more advanced teaching methods by seeking for co-operation opportunities with famous universities overseas. For example, cooperating with MIT, Xi'an Jiaotong University started the China Management Lab project in 2012, and it also co-worked with

Ohio University on the Global Consulting Project (GCP) in 2013, these projects providing the students in Xi'an Jiaotong University opportunities to work with both Chinese and overseas students to deal with real business problems based on Chinese enterprises.

In addition, some universities have encouraged staff to start to apply Problem Based Learning which turns "knowledge oriented" into "question oriented" learning, a central strategy in the student based learning at the centre of reform of higher education.

8.1.2. *Learning Activities*

Teaching methods are interdependent with learning activities. In China, methods chosen are vary slightly depending on whether students are pursuing first or second degrees.

Study for undergraduate students (first cycle) mainly relies on lectures by teachers, who just "teach" students according to the textbook. Students are often not provided with the empirical and application of knowledge activities noted above. Students are thus less motivated to interact with lecturers, such problems are not only reflected during lectures, but also after class and more crucially, at work. This may be reflected in the large gap noted in the consultation between achievement and importance of two communication competences.

The situation for postgraduate students (second cycle) is developing. Teachers not only serve a teaching role but also that of advisor or guiders of learning, using a greater range of the methods discussed above, which to some extent shows the notion of student-centred teaching and learning. Students through course learning, thesis writing and their dissertation research, writing, evaluation and defence, eventually become learners who have the capacities for independent learning, self-reflection, self-management as well as self-evaluation.

8.1.3. *Assessment*

A range of assessment methods is used in business administration in China. One of the most important methods is to make a strict and formal assessment on the module in order to gain its corresponding credits. Student performance in class and their overall progress are

also key factors for assessment. A large range of assessment methods was reported to be used, including knowledge or skill tests, oral presentations, experiments, reports, internship reports, social practice reports, academic thesis or report, or part of them, e.g. literature review, the critical thinking on existing research, Master's degree dissertation/Bachelor's degree graduation project, awards or records from competitions, and formal examinations.

Overall, it could be said that the assessment system in Business Administration in Chinese universities still has gaps in spite of improvements in the variety of methods used in recent years. However, staff are now aware of this and are working on improving assessment methods and techniques. This work is attracting increasing attention in universities in China.

8.2. Civil Engineering

Civil Engineering did not address this topic but preferred to focus on subject-specific competences (see section 6.2), and on Quality Assurance (see section 9.2).

8.3. Comparative Education

It has been found in Tuning Projects in other parts of the world that Teacher Education is very often competence and outcomes based, and teaching, learning and assessment are aligned to promote the development of the knowledge and skills teachers need in order to do a job. In the academic specialisations of Education, of which Comparative Education is one, this is not the case. These academic subjects share with other humanities and social sciences subjects no concrete link to a particular working environment, and are often dominated by knowledge acquisition. This appears to be true of Comparative Education in China, although, as they report, this is changing and new approaches are emerging.

8.3.1. *Teaching Methods*

There is a development towards a more diversified approach to replace the traditional "chalk and talk" and "cramming" teaching methods.

Students and staff are no longer confined to textbooks-multimedia and other modern teaching tools are used. Teachers no longer just give lectures alone but encourage students to get more involved in class discussions and other effective forms and continue to explore new teaching methods. Taking one of the required core courses —Introduction to Educational Research Methods— as an example, lectures, seminars, workshops, lectures by experts, experience sharing, case studies, self-learning and other diversified teaching methods are all used.

8.3.2. *Learning Activities*

In terms of "learning", students' current ways of learning have shifted from the traditional single individual learning, into a combination of independent learning and group work and other more diverse ways, and learning media have expanded from the traditional books to news, newspapers, magazines, the Internet and other multiple networks, and from traditional classroom learning to external visit learning, internship and other fields. However, the phenomenon of knowledge learning by rote still exists, and the phenomena of overemphasizing the importance of knowledge itself to get high scores, ignoring the skills and attitudes etc. continues. The existing ways of learning need to be further improved and developed towards the direction that is more scientific and helpful to transform the learning outcomes to skills.

8.3.3. *Assessment*

In terms of assessment, the Comparative Education curriculum in many institutions is assessed in the form of paper examinations or tests, the grades include daily performance tests and the results of final tests or exams, and teachers have an absolute right to decide the method and the marks. Daily performance grades are based on the attendance rate, classroom performance and mid-term assignments, and the percentage of daily performance as part of the total grade of the final exam is also decided independently by teachers.

The assessments under the Tuning framework are results-oriented, and the basic principle is to assess each student's established and expected learning outcomes. Therefore a wide range of assessment methods

is appropriate, including examinations, field surveys, group work, internship records, seminar presentations, papers etc. There is still much research and development to be done in order to align teaching methods, learning activities and assessments with the intended learning outcomes.

9

Quality Management

As noted in section 2.3 above China has a comprehensive and detailed system of quality assurance. What the EU project team hoped was that the subject teams would provide evidence of how quality assurance and quality enhancement interlink in the design and implementation of programmes: this was one of the items to be considered when under common quality assurance and enhancement criteria.

One of the groups did not address the topic in their report, while the other two groups made detailed comments on quality assurance, and rather less on quality enhancement.

9.1. Business Administration

Business Administration did not directly address this topic, possibly because of time constraints, but Quality Assurance is central to the subject area.

9.2. Civil Engineering

The engineering group focused their discussion on quality assurance rather than teaching, learning and assessment, and made a very full report. It is clear that members of the group have made a real contribution in this area, not only in their own universities but across China. Taking Tongji University as an example, it has taken the lead in building a "Teaching Quality Assurance System" for both undergraduate and graduate students (hereinafter referred to as QAS)

among universities across the country. In the spirit of "Total Quality Management", it mainly monitors the objectives of teaching quality, teaching resources, teaching process and improvement situation to form a circular and closed system ensuring constant progress.

The College of Civil Engineering has also established a teaching quality assurance system, aligned to that of the universities, and produced many specific teaching management documents, including the minimum undergraduate teaching task for teachers, the minimum number of students for classes, evaluation system and implementation method for teaching quality, the way of choosing textbooks, new teacher's teaching, new classes to be launched, bilingual courses, the guidance for *Course Design* and *Graduation Design*, position liability system for the experimental teaching centre, student experiment rules for experimental teaching centre, maintenance system for instruments and equipment, Q&A system for students, requirements for final exam and teaching documents archiving. All these effectively guarantee the teaching and the improvement of its quality.

The comments they make about teacher self-evaluation suggests that there is student centred learning: 'teachers in the "Excellent Course Action Plan" do self-evaluation in terms of knowledge instruction methods, students' learning ability training, their ability to express, analyse and solve problems, interaction between students and teachers, students' ability to raise questions as well as the way of conducting exam evaluation, upon the completion of each course.' Another comment underlines this, and also adds an indirect note with regard to assessing student learning outcomes: 'It is the overall trend of China's higher education that there is a shift from teacher-centred to student-centred learning. In recent years, while maintaining the daily teaching supervision, universities have changed their priorities of teaching quality assurance towards students' learning outcome. When a course ends, teachers will evaluate the learning outcome of students in addition to comprehensive test, thesis, discussion, attendance, experiments, and the exam on students' academic achievement, so as to provide the basis for a complete, objective and fair evaluation.'

9.3. Comparative Education

This group outlined the system as is included above in section 2.3. They added that not only does the system include government

policy guidance, various quality assessment activities of government agencies, and various quality assessment activities of non-government organizations but also the newly emerging university rankings.

In Education, internal quality assurance includes all kinds of teaching assessment, annual reports, teaching steering groups, teacher peer review, teacher assessment, student feedback systems, continuing professional development for teachers, etc., the latter organized independently by colleges and universities under the guidance of the Ministry of Education. They clearly stated that teaching steering committees discuss the findings of student and staff evaluations, but were not explicit about how this discussion feeds into programme and course design and improvement.

10

Conclusions

This study addressed two sets of objectives, first the questions posed by the Commissioner and the Deputy Minister in the People to People Summit, and secondly the practical outcomes agreed between the EU and Chinese Coordinators in order to further the discussion required.

To recall the former: The aim of the study is to *enable continued discussion* on education policies in order to

i. strengthen the compatibility of EU and China education systems;

ii. enhance outcome-based education;

iii. overcome obstacles to mobility;

iv. establish commonly acknowledged quality criteria; and

v. develop tools for mutual recognition.

10.1. The Compatibility of the Chinese and EU Education Systems

There is clearly a large degree of compatibility between the two systems of higher education. The increasing number of joint operations, one of which was a participant in this study, attests to that. Chinese and EU universities are broadly similar in that they represent different

emphases, some emphasizing research and some teaching. The higher education system also offers a large range of vocational institutions offering mostly sub-degree qualifications. Another similarity is that the most prestigious universities for research tend to provide high quality learning environments for their students in terms of material and human resources, creativity, links to industry and the world of work, and international partnerships.

In this study the teams explored something of the complexity of the Chinese system, but found that it is not very visible as a system on, for example, the internet. General documentation in English is not always easy to access, although many universities have useful individual web sites. One of the areas where the two systems are different is that EU degrees normally demand a greater intensity of student workload studying the principle subject, even at undergraduate level. Elective courses are available, both within the general subject area, and outside it, but these normally represent a small percentage of the total credits, whereas in China the compulsory elective courses demand a considerable time input in the first year.

Another aspect which may affect the intensity of study is that in the final year of study students spend time seeking employment, thus diminishing their concentration on their subject work.

Independent projects and dissertations frequently form the 'capstone' evaluation and opportunity for learning of students in both the EU and China. However, in the EU these are both compulsory for the award of the degree and credit bearing, while in China they carry no credits. No evidence was available from China about the criteria for success in the production of these longer pieces of work; however, any work that carries credit is described fully for the benefit of both students, employers, other academics and society.

Another major difference that affects compatibility is the lack of a national credit system in China. Europe has one system that all countries follow; this is based on student workload and not on contact hours. The Chinese participants in this study concluded that it would be very useful to consider the development of a national student workload and outcomes based credit system.

Most importantly, all EU systems of education have a Qualifications Framework. The Chinese system of higher education has, as noted

above, a variety of different types of higher education institution. Within these there are a number of different awards: three cycles at university level, and a number of sub-degree vocational awards. People in China may feel that they intuit what the different awards from different establishments mean, but when the reform process began in Europe it was found that such intuitions can be misguided. The literature tells us that students from some institutions find it more difficult to find a job – is this because of fact or prejudice? A qualifications framework, which describes the standards for the different cycles and levels, would be not only transparent but also fair to all graduates.

10.2. The Enhancement of Outcomes Based Approaches

Most universities in Europe have now adopted approaches to student learning that include the development of both knowledge and a range of competences for using knowledge, for employment, and for being a better citizen, among others. These are supported from above by qualifications frameworks that define the levels and scope of achievement for each cycle of university education. Universities must provide their graduates with a description of their achievement during their studies, usually known as a Diploma Supplement, which includes competences as well as content covered.

In China, change is beginning to occur, and the Ministry of Education wishes to encourage this, but as can be observed in part from the lists of subject specific outcomes designed by the groups, and also from the discussion in the introduction, the mind-set is on the development of theoretical knowledge. There is a noble tradition of learning in which students have to learn the knowledge base thoroughly for later application in the world of work. This approach does not work as well in modern economies as it may once have done. Employers expect graduates to enter the workforce capable of making a contribution of practice. Additionally, as was reported in the results of the surveys, work is now undertaken in teams, and even the new entrants as team members are expected to have the communication skills that only an interactive education can develop to the level desired.

In an increasingly global economy, where students may go overseas to study, Chinese students would initially be disadvantaged at two levels:

one their transcripts might not include a range of achievement in terms of both knowledge and skills, and they might find it more difficult to adjust easily to their new environment. For EU students studying in China, there would be complementary difficulties, not least of which would be the accreditation of their study on return.

10.3. Overcoming obstacles to mobility

One major obstacle to mobility between two multi-lingual entities is language. However, most student mobility is likely to be postgraduate, and the study has shown that foreign language learning is a priority for students in China, partly because so much of the literature is now published in English. Europe also has a sound tradition of learning foreign languages, especially English, and many postgraduate programmes are now offered in English. Undergraduate mobility from the EU to China may comprise those students who are majoring in Chinese languages and culture.

The main technical obstacles to mobility have been addressed in the two preceding paragraphs. Financial obstacles might also be an issue, but these are offset to some extent by scholarships (offered by China) and grants offered by the EU. Mobile students from China are, however, overwhelmingly financed by families.

10.4. Establish Commonly Acknowledged Quality Criteria

One of the strengths that emerged from the study was the robustness of the quality assurance framework in China. Procedures are in place to thoroughly scrutinise higher education provision at institutional and programme levels. It is done under the auspices of the Academic Degree Committee of the China State Council, and where appropriate also involves professional bodies. In the EU the responsible body may be a Quality Assurance Agency which is asked by governments to perform similar functions.

Quality Assurance treads a difficult path between measurement and evaluation. Many procedures are effective in capturing what is being done, without being able to say how well or badly this is happening and how changes can be effected as a result. There is evidence in China that Quality Enhancement occurs, e.g. teaching committees

discuss the results of the QA procedures in education, but there was no detail about how this information is used. Equally there is evidence of an emphasis on individual success; teachers rated badly by students are censured: courses are part of programmes, and should not of themselves be considered as individual but integrated. Assessment procedures are another example where there is clearly a degree of independence on the part of individual lecturers that is almost unheard of in Europe.

Once again, the lack of a Qualifications Framework in China weakens objective evaluation of programmes.

10.5. Develop Tools for Mutual Recognition

This study shows that there is already a good foundation of similarities on which to work on mutual recognition. Some structures are similar; informal recognition undoubtedly already exists given the numbers of joint projects in higher education; the quality assurance systems are broadly compatible.

It will require more in-depth study and a wider approach to develop the tools for efficient and secure mutual recognition. Two key tools are required: the development of a student workload and learning outcomes based credit system and a Chinese Qualifications Framework for higher education.

A similar procedure could be sued to do this as has been employed in the current study, but with a wider group of participants from both the EU and China. A small specialist group could focus on developing a Qualifications Framework, comprising experts from China and the Quality Assurance Agencies in Europe, and academics drawn from Chinese and European universities could work on learning outcomes and student workload.

10.6. The Instrumental Objectives of the Study

Five outcomes were agreed at the outset. These were

i. *The establishment of three disciplinary working groups of 5 universities each with high prestige and profile in their respective academic fields which could in practice serve as guiding examples for all other institutions in China*

The scope of the study was deliberately limited – it was a pilot. The three disciplines chosen were represented by prestigious institutions which are not wholly typical of the sector in China, but which performed the task eminently well. An important outcome of the team meetings between the groups of European and Chinese academics was the process of building trust and confidence between all involved. This steadily developed, allowing for the frank and open discussion necessary to develop mutual understanding of the higher education systems in China and Europe. A field trip of the academic leaders of the three subject areas and the MoE team to three European Higher Education institutions facilitated this process.

The subjects chosen only represent three of the twelve disciplinary areas in the Ministry of Education catalogue of disciplines: Education, Management, and Technology. In European terms this would represent two: Social Sciences and Engineering. The discipline areas not covered all have their own needs and characteristics as we know from other studies. Some of the more professionally oriented subjects such as Nursing, Medicine, and Teacher Education, which are already working on the development of competences, can be very illuminating for other subjects when good practices are shared. It would therefore be advisable to involve more subject areas disciplines to cover the whole spectrum of higher education.

With regard to the sharing of good practices, Tuning projects normally bring all groups together in one location for the seminars in order to encourage cross disciplinary discussion and learning. One of the China-based seminars was joint, as was (partly) the visit to Europe of the group coordinators. Other seminars were held in separate locations, with some of the Tuning team travelling between them. This structure was successful in terms of the work achieved, but lacked the cohesive dynamic of the jointly attended seminars. There are differences in the outcomes for the groups, such as sections that are missing in their final reports, e.g. teaching, learning and assessment in the case of the Civil Engineers and Quality Assurance in Business Administration. Although not vitally important, this limits the overview obtainable from the results.

ii. *Each subject group would develop lists of subject and generic competences and conduct a consultative survey among four stakeholder groups on the relevance of these, the outcomes being published in a research paper*

The development of competences and the consultation were achieved, by all three groups, with great efficiency given the time constraints. The work produced interesting results in all groups, stimulating discussion about the nature of student learning, curricular content, assessment and teaching, and the needs of employers. There is no doubt that the academic groups will wish to refine their lists of competences; nevertheless what they have achieved provides a very solid basis for further work.

Research in other countries, including Asian, has found that what employers want is education institutions to seek the improvement of the skill set of graduates; to recognise the importance of soft skills such as teamwork and communication; to refocus assessment, teaching-learning processes, and curricula away from lower-order thinking skills, such as remembering and understanding, towards higher-order skills such as analysing and solving problems, as well as creativity; and interact more with employers to understand the particular demand for skills in that region and sector. The work done in China supports this finding.

The most interesting result in the ranking was in interpersonal skills and teamwork which were much more highly rated from the workplace. Most striking was the low ranking of the competence 'ability to communicate with non-experts in the field', surely a sine qua non for graduates entering potential management roles. This resonates with some comments on teaching that noted the non-interactive approaches normally used with undergraduate students. It is also worth noting the importance given to the competence 'will to succeed' by employers and workers. It may well be that more research is needed to identify the differences in priority between the workplace and the institutions in terms of the importance of competences.

None of the groups had a competence related to respect for the environment, surprising from these universities mostly drawn from the ranks Project 985 in a country where there is a focus on 'green' competences. Research has shown that Project 985 universities performed better in providing "green education" than other universities. It has been proved that those universities with higher comprehensive

strength in teaching and research often play a more powerful exemplary role in developing 'green education' (Huabin Xiong et al., 2013). It was also for this reason that such universities were invited to be participants in this study.

All of the groups found that knowledge based competences were highly regarded and well achieved, an unsurprising outcome given the emphasis on this in the present curriculum and ways of teaching and testing. The third outcome is three substantial reports containing a full account of the work undertaken by the subject teams involved. The reports follow a more or less fixed template, and offer a wealth of information about the Chinese educational system in general and about the three subject areas in particular. They also highlight the challenges ahead.

iii. *Production of a conceptual framework or meta profile for each of the subject would be developed*

Two of the three groups, Business Administration and Comparative Education, produced original frameworks, while Civil Engineering provided the current framework. As a professionally oriented subject area, supported by national and international professional bodies, such frameworks are already available to them.

The two groups who produced new frameworks showed in their discussions how potentially flexible these are and how applicable to programme design within the subject area. Both groups also discussed the question of level differentiation between undergraduate and postgraduate programmes, underlining the need for a Qualifications Framework.

iv. *Production of paper identifying similarities and differences between European and Chinese HE would be produced*

This report represents the elements of the first draft for such a paper. It was agreed that a detailed paper is not feasible at this stage; more research is required. During the working seminars with the groups there was much discussion on the topic, and their reports make clear where they stand on these issues.

A small working party of academics from Tuning and China might be tasked to flesh out this topic in more detail.

v. *Connections would be initiated between Chinese and European disciplinary networks as well as higher education institutions – to be met by linking the outcomes of the Tuning EU-China Study with the (work established by) Tuning networks related to Business Studies, Educational Sciences and Engineering*

The material produced and now available now forms the basis for meeting the fifth agreed outcome, establishing connections between Chinese and European disciplinary networks and higher education institutions by linking the outcomes of the China-EU Tuning to others. Relevant European networks have been directly informed about the results and the Tuning and Chinese websites are also being used as important instruments to distribute the outcomes. Within China the Ministry of Education will be active in disseminating the study through the collected reports that were produced in the Chinese language.

In conclusion, the challenges China has to face in transferring from a teaching to a learning based approach, and the necessity of moving to a more transparent system were fully understood and supported. The Study has clearly highlighted the relevance of the Tuning tools as a means for reform towards a Learning Outcomes approach.

Having started the process of strengthening the compatibility of EU and China education systems, it makes sense to continue this process.

11

References

ALTBACH, Philip G., Liz REISBERG, Laura E. RUMBLEY (2009) Trends in Global Higher Education: Tracking an Academic Revolution A Report Prepared for the UNESCO 2009 World Conference on Higher Education. United Nations Educational, Scientific and Cultural Organization info@iiep.unesco.org

BENEITONE, P., WAGENAAR, R. and DOU, X. (2013) The analysis of Generic and Subject Specific Competences in three subject areas : Based on the China-EU Tuning Joint Study Project Questionnaire (paper prepared for the Project and available at http://tuningchina.org/wp-content/uploads/2014/11/Analysis-of-General-and-Subject-Specific-Competences-from-China-Eu-Tuning-Joint-Project_revised-Nov-2013.pdf).

BRAY, M. (1999) 'The control of education: Issues and tensions in centralization and decentralization'. In: R.F. ARNOVE and C.A. TORRES (eds.), *Comparative Education: The dialectic of the global and the local* (pp. 207-232). Lanham, Md: Rowman & Littlefield.

BRITISH COUNCIL (2012) *The shape of things to come: higher education global trends and emerging opportunities to 2020* London, The British Council.

CHE, W. (2010) credit system and qualification recognition: Promoting international academic mobility. Paper presented at the ASEM seminar on credits and learning outcomes: credit systems and learning outcomes in ASEM countries, Bergen.

FANG, XU. (2009) *Application Issues and thinking of PBL in business management class teaching,* Logistics engineering and management (in Chinese), 2009(8):165-166.

GONZALEZ, Julia and Robert WAGENAAR (eds.), (2008) *Tuning Educational Structures in Europe*, 2nd Edition, University of Deusto.

GU, Mingyuan (ed.) (1998). *National Cultural Traditions and Education Modernization*. Beijing: BNU Press, 447 pp. [in Chinese].

HEFEI: Anhui Education Press (in Chinese).

HUABIN, Xiong, Denggao FU, Changqun DUAN, Chang'E. Liu, Xueqing YANG, Renqing WANG (2013) Current Status of Green Curriculum in Higher Education of Mainland China *Journal of Cleaner Production* 61 100-105 http://jxcg.ynu.edu.cn/1/ziyuan/luwen/jglw/1.pdf

HUANG, Futao (2005) Qualitative Enhancement and Quantitative Growth: Changes and Trends of China's Higher Education. *Higher Education Policy* 18, 117-130.

INFORMATION ABOUT THE STRUCTURE OF THE EDUCATION SYSTEM OF CHINA AND THE EVALUATION OF DEGREES OBTAINED IN CHINA (2014) International recognition Department, NUFFIC, The Hague http://www.nuffic.nl/en/library/country-module-china.pdf

JIN, Guizhen (2009) *Challenges and Goals in Chinese Education http://es.slideshare.net/mikeparent/education-in-china*

JINHUAN, SHI (2009) Undergraduate education Report 2009 of Tsinghua University*, Education Research of Tsinghua University (in Chinese*). 2009 (10):1-12.

LIST OF HIGHER EDUCATION INSTITUTIONS IN CHINA www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_2812/200906/48836.html (English version).

LIWEN, Tan. Review and Reflection on the Development of China Management since the Reform and Opening up [J],Journal of Wuhan University (Philosophy And Social Sciences Edition), in Chinese 2013 (1) 79-86.

MEI, Li and Rui YANG (2013) Governance Reforms in Higher Education: A Study of Institutional Autonomy In China. In MARTIN, Michaela, N.V. VARGHESE (eds.) *Governance reforms in higher education: A study of institutional autonomy in Asian countries.* International Institute for Educational Planning

MINISTRY OF EDUCATION, People's Republic of China www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_2812/200906/48836.html (English version) List of higher education institutions.

NEAVE, G.; VAN VUGHT, F. (1994) *Government and higher education relationship across three continents: The winds of change.* Exeter: BPC Wheaton Ltd.

OECD (2012) *China in Focus: Lessons and Challenges*, OECD, Paris.

PAN, S.Y. (2009) *University autonomy, the state, and social change in China*. Hong Kong: Hong Kong University Press.

QIANG, Zha and Chuanyi WANG (2014) Issues and Challenges for Post-Massification Higher Education: the Chinese Response in Broadhead, I (ed.) *Grand Challenges in Asia-Pacific Education* London, The British Council.

SEPPO, Hölttä, Yuzhuo CAI 2012 *Governance Reforms in Chinese Higher Education: A Finnish Perspective*. CEREC working paper series Chinese Education Research and Exchange Centre.

WANG, Catherine Yan (2012) The Education Policies and Issues in China and Recommendations for Education Cooperation *Asia-Pacific Collaborative Education Journal* Vol. 8, No.2, pp. 51-57.

YUOHOU, Cai (2013) Presentation in PowerPoint BRICS conference Bergen.

ZHA, Q. (2009) Diversification or homogenization: How governments and markets have combined to (re)shape Chinese higher education in its recent massification process. Dordrecht, Netherlands, Springer, *Higher Education*. Volume 58, Issue 1 , pp. 41-58.

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