

## Making People Employable: Reforming Higher Education in China

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### ABSTRACT

*Today, more than ever before in human history, the wealth or poverty of nations depends on the quality of higher education. Those with a larger repertoire of skills and a greater capacity for learning can look forward to lifetimes of unprecedented economic fulfillment. This paper tries to debunk some of the myths surrounding higher education and define what quality education means. This paper also outlines the nature of crisis afflicting higher education in China, points out the opportunities and highlights a few reform proposals in China to address the current morass.*

**Keywords:** Higher education, quality assurance, skills, employability, reforms

### INTRODUCTION

It is imperative for China to quickly put in place the building blocks of a knowledge economy. The first step in this direction requires moving the country out of the “low creative skills, low communication skills and low expectations” trap which permeates many spheres of economic activity. To meet this objective even partly, it will be necessary to address the fundamental crisis in higher education related to access and completion, in quality, as well as market relevance. There have been several major attempts at playing ‘catch up’ during the last 150 years and the dynamics of the process have been studied extensively. These include German attempts to emulate the earlier industrial revolution in England [Gershenkron (1962)] and the forced modernization of Meiji Japanese society [Morishima (1994)], both of which took place in the 19th century. More recent studies have focused on the post-war boom in Europe, the sudden rise of NICs in East Asia and of course China. The conditions for latecomers may be different from those who have gone before, but the institutional evolution of domestic knowledge systems and economic catch-up depends critically upon collective competence building as well as technological congruence and social capability and infrastructure [Abramovitz (1994)]. While economic integration, larger and more homogeneous markets, and large scale production technologies have driven growth and development, the process of sustained growth experienced by several countries and regions would not have been possible without a general increase in educational levels [Barro and Lee (2004)] and additional resources being allocated to public and private R&D. This facilitated growth of a large stock of human capital, and encouraged innovation in firms [Schumpeter 1912; Harvard (1934)], and explained to a considerable extent Europe’s successful ‘catch-up’ with the USA or the phenomenal rate of growth, first in East and South East Asia and now in China. This article suggests that even if institutional excellence and quality, creative and communication skills can be assured, the major crisis facing the Chinese economy will remain the absence of employable skills. Quality assurance and competence in hard and soft skills rather than under investment in business and economic activity. This of course reflects into one of the three informational asymmetries suggested by Schumpeterian competition dynamics [Schumpeter (1939–1942) technological innovation and has important implications for China’s competitiveness in the global economy and its attempts at playing ‘catch-up’.

## HIGHER EDUCATION IN CHINA

Higher education at the undergraduate level includes two and three-year associate programs, and four-year bachelor's degree programs. There are junior colleges and higher vocational colleges which only offer associate degrees. However, associate degrees are also offered by universities offering four-year bachelor's degrees. Three-year masters and three-year doctoral degrees are offered by both universities and research institutes. Higher education institutions are administered at the provincial and/or central level. Institutions have some degree of autonomy, most clearly seen in staff recruitment. A unique characteristic of the Chinese system is the presence of a dual administrative structure, wherein the Chinese Communist Party sets up its own administrative structure within each university, parallel to the administrative system. Between 1950 and 1980, universities were fully funded by the state. In the 1990s we witnessed a shift in financing policies, with the state encouraging universities to charge tuition fees and generate revenues. Fiscal funding accounted for no more than 43% of all university income in 2005. The average tuition fee for a student in public institutions is currently at around 5000 Yuan per year. Currently 39 universities receive development funding with the intent of transforming them into “world class” research universities (985 project universities). These constitute the top layer of Chinese universities. The second layer is comprised of 73 teaching and research universities selected to receive funding for quality development in certain fields. Together the two groups comprise the project 211 universities. In the third layer there are around 600 institutions, usually regional and with greater emphasis on teaching. The remaining more than 1,000 institutions are at the bottom, primarily providing associate programs. Most private institutions are mainly in the bottom layer. In the past two decades, reforms in Chinese higher education have achieved remarkable success, including the establishment of a legal environment within which the higher education system can operate, the relaxation of state control, the realization of mass higher education, the establishment of quality assurance systems, the introduction of market mechanisms, the development of competitive universities, and the advancement of internationalization. Despite these achievements reforms have always been associated with difficulties and dilemmas which hamper china efforts at making the transition from a labor-intensive economy to a knowledge-based economy driven by innovation and international competitiveness.

### Funding of Higher Education

From the 1950s up to 1980, all higher education institutions were almost entirely financed by State appropriations. Funding for each institution for the current year was determined by an “incremental approach”, based on the previous budget. The government made incremental adjustments according to higher education institutions’ development needs and the available budget for higher education. About the funding of higher education from 1990 to 2001 the graph shows the outline.

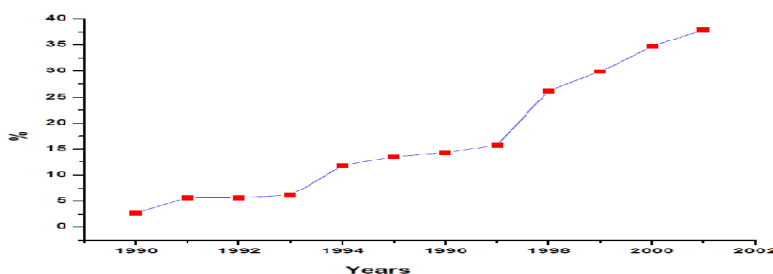


Figure 1. Funding in higher education Years v/s Subtotal % of educational revenue from 1990-2001  
Source: Zha (2009 p.48)

## Higher Education Institutions

By the end of 2009, there were 2,305 regular higher education institutions, including 658 degree (either bachelor or associate degree) granting private higher education institutions (Chinese Ministry of Education, 2010). The higher education system in China is vertically divided into four layers, namely research institutions, research & teaching institutions, teaching institutions, and application oriented institutions (Cheng, 2004, p.207-208). Research universities are typically “project 985”. The four layers of Chinese regular higher education institutions can be described in this way:

- a. University Research institutions, “985”.
- b. University Research and Teaching, “211”.
- c. Teaching institutions (some are also orientated to both teaching and research).
- d. Application oriented institutions.

## Teacher and Student Numbers

By 2010, staff numbers in regular higher education institutions had reached 2.16 million, of which teachers comprised 1.34 million. The student/teacher ratio is 17.33:1. Total enrolment in all higher education institutions amounts to 29.22 million, including 0.26 million doctoral students, 1.28million master’s students, 22.32 million undergraduate students in regulation higher education Institutions and 5.36 million undergraduate students in adult higher education institutions (Chinese Ministry of Education, 2011) .Since the 1990s, both the numbers of teaching staff and students have increased significantly. However, the growth in student numbers far outstrips that of teachers, which is reflected in the student/teacher ratio. The high student/teacher ratio illustrates a shortage of teachers in Chinese higher education. The table also indicates that doctoral degree holders among higher education teachers make up only around 10% of total (No: 1000) teaching staff. This is still very low.

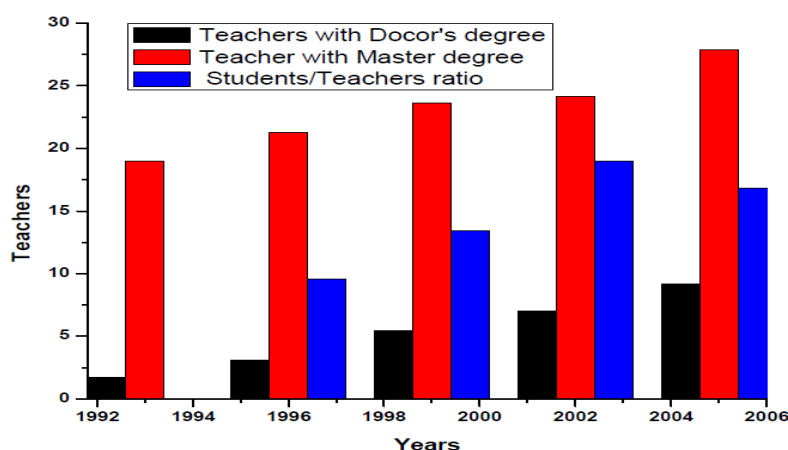


Figure 2. The change of teacher numbers in higher education institutions 1990-2006.  
Source: Wang and Liu (2009 p.14)

## SKILLS BIAS IN GROWTH

### Worldwide Networks

The presently known industrial economy is being transformed inexorably into yet undefined morphologies on the shoulders of the information and technology revolution. The nature of work and workplace is changing, and national economies are diffusing across national

boundaries into truly global networks, whether in industry, services or ownership. This dispersal of work and strategic linkages across national boundaries, coupled with information integration, and a shift in the technological content (NSF, SEI 2006) of world manufacturing and trade towards high technology. The following figure is the most conspicuous feature of the globalised economy of the present and foreseeable future in China. One manifestation is a major re-location [Lamy (2004)] of manufacturing and even services from developed to less developed countries including China emerging as major destinations. Figure 3 shows the changing share of high technology in manufacturing by China from 1990 to 2004.

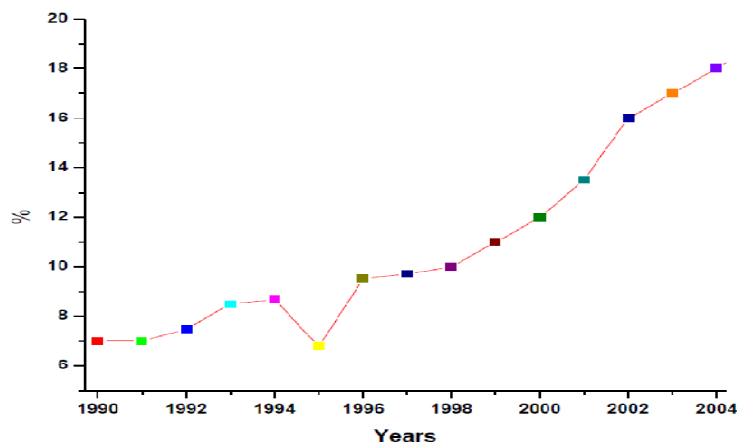


Figure 3. Changing Share of High-technology in Manufacturing by China 1990–2004  
Source: NSF, USA, SEI (2006)

Almost all developed economies can now be identified as “knowledge economies” to some extent or the other, and they are taking further steps to consolidate this position by becoming even more knowledge intensive and competitive [Romer (2004)]. Even when their productivity growth has slowed down, the rate of increase in the skill bias in technology has not. In some newly industrialized Asian countries including China, such activities have already led to the evolution of small and medium enterprises (SMEs) into major global players and conglomerates. These now offer complete end-to-end services in the supply chain, whether as manufacturers of piece parts and systems, or providers of services, design, and research. Machin and van Reenen (2007, 1997) regard higher skills as one input factor in the production process, whereby higher educated workers are more able to respond to new technologies such as ICT than less educated workers, and are also able to better react to organizational changes such as decentralization of decision making and control, collective work, job rotation and skills segregation/homogenization in modern firms. This non-neutral technological change makes higher educated workers much more attractive for employers and rising worker skills could perhaps create its own demand.

### Economic and Social Returns to Higher Education

This is about the changing economic value of higher education in China economic powerhouse. Here I discuss to study the payoff to education for two main reasons. First, these payoffs are primarily shaped by varied economic and political forces, not by “iron rule” of diminishing returns to capital. The China is good example of this because it is big, developing economies with rapidly expanding supply and demand contexts, particularly at the university level. Secondly China produces a high proportion of university graduates, especially in technical field. So I want to assess whether the level and observed changes in rates help us to understand the expansion and financing of higher education.

Especially important to note is that the rising payoff to higher education has occurred despite a massive increase in university graduates as the government rapidly expanded higher education enrollment in the 2000s. The “real” payoff to higher education graduates in the late 1980s and early 1990s was already very high, as reflected in the studies showing a large gap between productivity estimates and wages for the higher educated (Fleisher and Chen 1997). Tight government control on higher education enrollment could have played an important role in driving up this “unmeasured” payoff across age groups. However, this high rate was probably an overestimate of the “true” rate because of the sizable selection bias when only 4 percent of the age cohort attended and completed university.

Younger workers are likely to have entered the labor market during the period when labor market reforms had already been implemented and with skills more in line with the kind of work required in the new Chinese economy, so their wages are more likely to reflect the real payoff to education rises. The demand for the higher educated increased rapidly in the 1990s and 2000s with China’s very high growth rate and shift to financial and business services as well as more sophisticated manufacturing production and sharp increase in private business. Fan and colleagues (2010) find that the high return (40-60 percent) to four year institutions in particular may have continuing repercussions for widening income inequality in China.

## **Higher Education and Skills**

### ***Higher Education as a Provider of Skills***

Skills are produced in many different ways, dynamically, and through multiple actors. Pre-employment education and training, on-the-job training, work and life experience, and peer learning all contribute to skill development that could be useful on the job. Whereas academic skills are normally acquired through formal and non formal educational situations, generic or life skills are acquired in various ways. Early-childhood parental education, specifically targeted curricular and pedagogical approaches, on-the-job training, and work experience all develop and enrich these types of skills. Technical skills are generally provided through tertiary training programs, on-the-job training, and learning-by-doing. Skill acquisition is thus a cumulative and dynamic process that occurs throughout the life cycle. It starts at birth with parental education and continues through the course of school education, training, and experience. And just as these skills can grow over time, they can deteriorate if the possibilities for lifelong learning are not well developed. Actors outside the formal education system also have a large role. Quality non formal education and training can provide academic, generic, and technical skills and can complement formal education with additional generic or technical skill instruction. It can also provide opportunities to update academic and technical skills over time. Firm and on-the-job training can complement both formal and non formal education and training by providing additional job-relevant technical and generic skills. This type of training can also provide opportunities to maintain the existing generic and technical skills of workers. Within this broad skill framework, higher education plays a crucial role—perhaps no more clearly than in skill provision. Higher education institutions provide the basis for the range of skills needed for both mature and developing economies. Tertiary graduates enter the workforce with cognitive, technical, social, and behavioral skills honed at university that allow them to bring advanced knowledge to bear on complex problems, use that knowledge to work toward their solution, perform research, and develop ideas of more productive ways of performing. It is during higher education that more mature students have the capacity, ability, and time to learn sophisticated client orientation, communication, problem solving, and creativity skills, not only through close links with particular careers (for example, business and communication), but also across careers through the use of well-crafted teaching-learning methodologies. While many

practical skills will be acquired on the job, higher education also offers a critical opportunity to its students to apply academic skills to more concrete and practical cases through case studies and other methodologies, with wider breadth than more specific on-the-job training would provide. Other research indicates that higher education instructors can teach students relevant technical and behavioral skills that they will need to know and use as industrial actors, without actually doing industrial research themselves. These points reflect in some part a changing concept of the role of higher education. As technological structures and the nature of industry evolve, academic qualifications are increasingly taken as indicators of a particular level of academic competence and of the skills to deal with the demands of a fast-changing work environment. Employers expect tertiary graduates to possess the academic, generic, and technical skills to increase their productivity and growth. Increasingly, employers also expect a smaller group of workers to possess the ability to think, to be creative, and to have the capacity to spur innovation. This is consistent with merging research on academic knowledge transfer, which has found that skilled graduates bring to industry attitudes and abilities for acquiring knowledge and using it in novel ways. Keen to bolster their productivity, East Asian economies are giving new consideration to the knowledge and skills of their workers, and consequently the education and training systems that shape them. Policy makers in China are reexamining how higher education systems should prepare graduates to take their places in the labor force. They are also asking how graduates should be equipped to deal with changing labor force structures and demands from employers in ways that can meet both the current and future needs of the economy. A better perspective of higher education's potential for delivering skills requires knowing the skills. A famous quote exactly describe the benefit of the skills and knowledge(Once your degree has unlocked the door, you'll need the right mix of skills, abilities and personal qualities in order to turn the handle and give the door the push that will open it to you).

## **METHODOLOGIES FOR MAKING PEOPLE EMPLOYABLE**

Many of the skills needed to make people employable are specific to particular occupations. However, increasingly employers are defining a set of “generic”, usually personal, skills which they seek when recruiting new employees. These “generic skills” include, for example, communication skills, creative and leadership skills the ability to apply basic literacy and numeracy in a work situation, being a “team player”, the ability to relate to customers and clients, taking initiative (for one's own work and personal and career development), taking responsibility and making decisions. Occupational skills may be seen as necessary but not enough, or as “easily trained in”.

China's recent upsurge in graduate unemployment relates to a number of things. One important aspect is its education policy-making and economic development as well as reforms in the economy and in its higher education. Recently, the annual growth in the numbers of new graduates, estimated at four million for 2005, and in the rate of young unemployed graduates should logically bring about a withdrawal from higher education. Because with 8% annual growth, the Chinese labor market may well generate about eight million jobs, but these are mainly ones in manufacturing requiring low-level qualifications. This rising enrollment made employment an issue and a serious challenge for China. The employment situation for new college graduates is different from the working population in general. The graduate unemployment crisis in China represents a wasteful investment of scarce resources. Large sums of money have consequently been invested in educating unemployed graduates who could otherwise have been invested in job-creating productive programs. With a flood of new graduates, individuals are having a tough time finding jobs in an increasingly competitive labor market. Meanwhile, graduates have some

negative expectations under the pressure of seeking jobs. Nanjing Normal University has surveyed students who expected to graduate in 2006 about "College Student's Attitudes about Job Seeking and Career". 44.21% prefer to get an employment contract first, and then consider pursuing a new job position which is what they really desire to be employed for an average of 2 years. This phenomenon not only causes underemployment and high turnover in the job market, but also, graduates will have lower levels of job satisfaction, work commitment, job involvement and internal China's recent upsurge in graduate unemployment has specific causes relating to economic development, education policy-making, and reforms in the economy as well as in higher education. With a focus on graduate unemployment, this study looks at the historical and socio-economic conditions for China's move to raise the level of participation in higher education, the rationale behind the 1999 decision to accelerate the pace of expansion in the tertiary education sector, and the impact of this rapid expansion on society, and on graduate employment in particular. The Chinese government should issue a circular urging universities and colleges to strengthen their efforts in preparing students for the workplace. The government should set up its own internship scheme to help graduates find work during the recession. In this scheme, universities should be encouraged to exchange ideas and develop programs aimed at improving the entrepreneurship and employability of graduates. "We found employers in china put a great emphasis on leadership qualities and initiative - things that are learned through the activities students engage in and the responsibilities they take on during their time at university," Heffernan told a conference in London organized by the council, which is inviting proposals for 10 new partnerships in china."However, there are some clear differences in the emphasis put on different attributes, such as the value placed by the Chinese on 'guanxi', the network of connections that a person has built up," he said. For those wanting to work in the public service, guanxi is likely to include connections with the Communist Party: but more generally it includes family and friends and links with people working in other companies, voluntary organizations, or leisure activities. The Chinese also tend to take more time building up relationships with people before getting down to business. The China Agricultural University in Beijing is working to determine the skills most likely to lead to employability and successful careers. Staff at universities have conducted face-to-face and telephone interviews with local employers of graduates in three areas, marketing, human resources and finance-accounting. A draft of report should be published which shows marketing executives in china put a high emphasis on good communication skills, including written and verbal communication, networking skills and foreign language ability - as the top priority followed by the ability to work in a team. The Chinese employers should set a demand who completes a job and get things done will be highly prized. Next they seek creativity - an attribute of growing importance in the dynamic, developing market in China that requires people to be good at thinking and putting their ideas and insights into action. Graduates seeking work in finance and accountancy should have a good level of commercial awareness and be able to demonstrate a breadth of knowledge outside their academic comfort zone. The fast growth of China's economy which has required updating of law and regulation, employers in the financial sector value graduates with the ability to continuously update their knowledge. "Banking in China is challenged by change," said one Chinese bank executive. "We not only care about what our new staff has learned - that is textbook knowledge mainly. We care about whether the new person can autonomously learn in the future." Employers in China value the personal skills of graduates seeking work in human resources. China employers should view the most important attribute as time management and good organization. Personal skills, including being approachable, confident, emotionally strong, empathetic and patient should be the second most important requirement. The Chinese HR

managers stress the importance of a new recruit being ethically strong and possessing high moral principles followed by good communication skills. Li Jiahua, a professor of higher education and Vice-president of the China Youth University for Political Science, told the council conference, higher education facing challenges in terms of student motivation and employment. The number of students had increased more than fourfold in China since 2001 and around 1.5 million of the country's more than six million graduates last year had not yet found jobs, he said. "Students in China generally lose touch with society and they need help to understand how companies work and what is involved in the different jobs and professions to reduce the gap of communication, territory and creative skills.

### **INTERNATIONALIZATION IN HIGHER EDUCATION**

In China, internationalization signifies an integration of China's higher education community with the international community. The internationalization of higher education in China at present takes the Following major forms:

1. Sending Chinese students and members of faculty abroad for advanced study or research;
2. Attracting foreign students to study in China;
3. Integrating international dimensions into university teaching and learning, including introducing foreign textbooks and references, and developing both English programmes and bilingual programmes (mainly in Chinese and English);
4. Providing transnational programmes in Chinese universities in cooperation with foreign institutional partners.

The internationalization of higher education is an inevitable result of China's integration into the global economy as well as an essential measure to improve its higher education system. The process of internationalization started as early as 1978, when China opened its doors to foreign investments. Current practice signifies the government's intent to integrate Chinese higher education more closely with the international community, as part of its strategy to build "world-class" Chinese universities and strengthen national economic competitiveness. The concrete implementation can be summed up as follows: student mobility, international dimensions in teaching and research, as well as joint educational provisions. Since the late 1990s, the focus has changed from promoting student mobility to enhancing the international dimension of teaching and research. An increasing number of original English language textbooks, mainly from the US, have been either directly used in Chinese universities or translated into Chinese language versions. Continuous efforts are being made to hold courses in English or bilingually (Chinese and English), as well as to strengthen foreign language (English in particular) skills among both teachers and students. There has been a dramatic expansion in the number of programmes for foreign languages/cross-cultural studies which lead to international professional qualifications at the graduate level. An increasing number of Chinese teachers have some learning or teaching experience from abroad, and international experts in a variety of fields are invited to teaching Chinese higher education institutions. The Chinese government encourages Chinese universities and research institutes to develop joint research projects with foreign partners by obtaining support from various sources. The EU has opened its research and technology development Framework Programme to China, allowing the participation of Chinese institutions. In turn China opened its National High Technology Research and Development Programme (863 programme) and the National Key Basic Research Programme (973 programme) to EU researchers and institutions.



Internationalization in higher education prepares students for the global workforce and enhances the learning skills and research.

## **QUALITY ASSURANCE**

Quality assurance has been integrated into the fabric of higher education in China, with the issue of quality in higher education - how to evaluate it and how to enhance it - now taking centre stage in Chinese higher education. In the past decade, the development of quality assurance in Chinese higher education has covered a broad spectrum of initiatives, from national policy, quality evaluation methodology, and institutional adoption of quality assurance schemes, to the matrix of quality evaluations. Welcomed, resisted, or debated, quality evaluation/assurance has become a staple of Chinese higher education over the last decade. As Vlk (2006) points out, quality assurance schemes are being developed in many states and higher education systems as one of the instruments necessary to adapt higher education institutions to the increasing demands put upon them by the states' economy and society, and equally to prepare or adapt the states' systems for the increasing impacts of globalization on higher education. 'Quality higher education' often remains undefined in operational terms, because there is no uniform understanding of the purpose (or multiple purposes) of higher education in current society (Westerheijden et al, 2007). The term 'quality' is applied to a number of characteristics, including excellence, value for money, conformance to specifications, transformation, and value added (Woodhouse, 2003). Similarly, there are many definitions of 'quality assurance' in the literature (e.g. Ball, 1985; van Vught & Westerheijden, 1993; Birnbaum, 1994; Frazer, 1995; Woodhouse,

1999). Harman (1998) suggests that, in essence, quality assurance refers to the systematic management and assessment procedures adopted to ensure achievement of specified quality or of improved quality, and to enable key stakeholders to have confidence in the management of quality and the outcomes achieved. Quality assurance may, in other words, be seen in a context of the regulation of higher education. The rapid expansion of higher education in China prompted debates about its efficiency, efficacy and equity. Public interest in and concern about quality has also intensified with the expansion of student numbers. The old optimistic conception of realizing personal ambition through university education has been strained by growing difficulties in university graduates' job placement. As a result of the process of Chinese higher education reaching its 'massification' stage, various quality related problems have arisen (Gu, 2006; Song & Song, 2006; Ding, 2008; Li & Zhang, 2008), such as a mismatch between financial input and student numbers: the rapid increase of student numbers leads to a decrease in resources per student; a structural shortage of qualified faculty; this shortage leads to a work overload for the current teachers, and to class sizes doubling or becoming several times larger than before. In this situation, there is very limited capacity to develop sufficient teacher-student interaction, or to adapt teaching to student needs; lower student entry levels: the broader entry into universities automatically lowers the student entry level; eagerness to achieve quick success: some institutions strive for a 'larger size' and 'higher level' in their educational provision. In order to get more research projects and to raise revenue, some institutions deliberately lower their entry requirement to attract additional students. The inappropriate use of teaching evaluation for purposes of teacher appraisal in these institutions increases unhealthy competition among teachers. Another problem is the lack of differentiation among Chinese higher education institutions. Smaller colleges attempt to model on the structure of large and comprehensive universities, and vocational schools seek to evolve into research institutions (Zhao & Sheng, 2008). These problems weaken the quality of higher education and the public's trust in higher education institutions and their graduates. It is in this context that the Chinese government has realized

that conventional higher education quality management structures are inappropriate in the context of a mass higher education system. 'Quality' is now a common theme and concern in various Chinese higher education policies and reports. Building quality assurance systems is perceived as part of the higher education modernization process. In the meantime, quality assessment might be seen as a government tool to regain some degree of control over institutions (Amaral & Maassen, 2007) and to meet the challenges of the government's steering capacity and policy effectiveness in the process of reforming Chinese higher education.

## **MAJOR EDUCATIONAL REFORMS IN CHINESE HIGHER EDUCATION**

In November 1985, China's Education Committee (now called the Ministry of Education) issued the 'Higher Education Evaluation Research and Experiment in Engineering Programmes', which aimed at using engineering education evaluation, in terms of institutional review, discipline and curriculum review, as the pilot for higher education quality evaluation. The pilot evaluation was carried out in around 500 higher education institutions. In October 1990, the 'Draft Regulation of Higher Education Institution Evaluation' was issued by the National Education Committee, the first regulation of higher education evaluation defining its aims, tasks, principles, system and procedure. In early 1994, the National Education Committee started to implement higher education evaluation on a large scale. The evaluation evolved through the following stages: qualified evaluation; excellence evaluation; randomized evaluation; and general evaluation. Qualified evaluation started in 1994 with the purpose of promoting standards of teaching and administration. This was only applied to those institutions that were established after 1976. A total of 179 institutions underwent this form of evaluation from 1994 to 2001. Excellence evaluation started in 1996 in the form of 'Project 211' for developing 100 first-class universities, with a number of key fields of research to be developed for the challenges of the twenty-first century. This form of evaluation was applied to those institutions with already well-established histories and reputations. Randomised evaluation started from 1998, targeted at those institutions situated between the post-1976 institutions and those of Project 211. Twenty-six institutions were evaluated under this form.

In 2002, these three forms of evaluation were integrated into the one entitled 'Undergraduate Teaching Quality Evaluation'. This was revised again into the current one in operation, with four resultant Categories: excellent, good, pass and fail (Zhou, 2005).

In April 2003, the 'Project for Quality Assurance and Further Reform in Higher Education Institutions' was initiated by the Ministry of Education, as an important component of the '2003-2007 Education Revitalization Action Plan'; it comprised a twelve-point framework for developing quality assurance in Chinese higher education, that consisted of:

1. Carrying out further reform on teaching and educational structures with the help of information technology;
2. Encouraging professors to teach undergraduate courses; offering a number of top-quality courses via the Internet to students all over the country;
3. Further improving the standards and methodology of teaching English to students of non- English majors;
4. Enhancing quality evaluation of higher education institutions, with five years as an evaluation cycle;

5. Establishing a series of national teaching bases and experiment bases via the facilitation of the Internet ;
6. Further developing vocational education to meet the needs of the market economy;
7. Further improving the structure of disciplines at Chinese higher education institutions with a focus on tertiary vocational programmes;
8. Promoting reform in medical education;
9. Building more efficient e-libraries and improving the quality of textbooks;
10. Enhancing students' ideological, ethical and cultural development; inviting top-quality teachers both at home and abroad to teach at Chinese higher education institutions.

### **Management Reforms**

In August 2004, the Higher Education Evaluation Centre (HEEC) of the Ministry of Education (MOE) was established in order to institutionalize and direct evaluation towards a regular, scientific, systematic and professional process. As Harman (1998) summarizes, there are a number of different models for administrative responsibility for the management of quality assurance at both national and institutional levels, and at national level the most common pattern is for responsibility to lie with a specialized unit or agency set up by the government. As a central agency that reports back to the Ministry of Education, the HEEC shoulders the responsibility for quality assurance management. Its main responsibilities are:

- I. To organize and implement higher education evaluation;
- II. To conduct research in policies, regulations and theories relating to higher education reform and evaluation;
- III. To develop international cooperation with evaluation agencies in other countries;
- IV. To undertake evaluator training;
- V. To provide evaluation-related consultation and information services.

At the beginning of 2006, Zhou Ji, the former Minister of Education, emphasized in a speech that all the universities and colleges in China should give more attention to the raising of teaching standards and quality assurance. The following four aspects were further elaborated in his comments on the implementation of the 'Project for Quality Assurance and Further Reform in Higher Education Institutions' that started in 2003 (He, 2007):

1. Selecting excellent teachers.
2. Establishing high-quality courses.
3. Further promoting the reform of teaching English to students of non-English majors.
4. Regulating and improving the higher education evaluation system.

Earlier, Harman (1998) had summarized the main approaches to quality assurance management using the following criteria:

- a. Responsible agency or unit;
- b. Participation in reviews and other activities;
- c. Main methodologies of review and assessment;
- d. Focus of quality assurance activities;
- e. Purposes of such activities;
- f. Report and or follow-up activities.

In 2003, the “2003-2007” Education Revitalization Action Plan’ was issued by the Ministry of Education. In it, five years was specified as the time in which the cycle for the undergraduate teaching evaluation should be repeated. The reforms which can bring best quality and excellence in higher education and make the students/people/graduates skillful to meet the demands of the employer are as under:

## **NEED OF FURTHER REFORMING IN HIGHER EDUCATION**

### **Reforming leadership**

Leadership must develop future vision keeping in view historical values. Financial management planning and resource allocation planning depends on vision of leadership. Such planning is vital for design of successful academic programs. Vision of leadership should establish clear perception, principles, policies and approaches to continually improve process of teaching and learning. It is achieved through process control on all financial, physical and human resources. Such quality control on processes can improve HEIs towards excellence. Performance of all processes should be measured and evaluated regularly for continuous improvement and to optimize program design effectiveness in HEIs.

### **Academic, Teaching and Curriculum Reforming**

- a. Building a teaching quality assurance system;
- b. Establishing agencies for educational evaluation;
- c. Developing a system of periodic review of teaching quality;
- d. Building links between program evaluation and professional qualifications and certificates;
- e. Formulating evaluation standards and indicators;
- f. Building data banks on college teaching;
- g. Developing an analyzing and reporting system.

### **Institutional Reforming**

The management of government sector universities should be made more autonomous rather keeping it linked with government.

- a. Committees of senior faculty should be responsible for faculty appointments and evaluation on tenure track system based on performance in research, teaching and service.
- b. To promote research culture with in universities, a research cell should be developed, to get the staff financial assistance, to facilitate research publication, to keep a record of the endeavors, to keep a liaison with the local and international donor agencies, to keep and maintain financial records.
- c. Concept of research labs should be initiated enabling to; avoid duplication of efforts, to work on the footing available, provide a forum for interaction.

### **MOE Programs and Projects**

The running of following programs may be credited to MOE:

- I. Capacity building of the faculty
- II. Under taking of revision of curriculum
- III. Development of infrastructure of higher education
- IV. Award of indigenous scholarships

- V. Grant of foreign scholarships
- VI. Patent filing support
- VII. Travel grant for participation in the conferences
- VIII. Increasing collaboration between industry and university research
- IX. Bringing in technology reforms

### **Information Technology Reforming**

The following reforms have been brought into the system - also known as e-reforms.

- a. Development of country wide educational research network
- b. Bringing in the reach of the scholars the use of digital sources
- c. Developing a research repository for the potential researchers
- d. Making learning possible through e-resources
- e. Making available the opportunity of video conferencing

### **Practical Reforming**

- a. Internship facilities for students of higher education institutions and universities should be ensured.
- b. Coordination between universities and industrial, agricultural, and other sectors of the economy should be ensured. Foreign Direct investment in Education sector be encouraged.
- c. Faculty exchange programs be launched.
- d. Credit exchange programs at local and international levels are launched.
- e. Produce students who can compete worldwide.
- f. Funding should be enhanced.
- g. University examination system should be made competitive and responsive to ultimate users and open to all students of the country.

### **CONCLUSION**

The empirical evidence shows a steady increase of the rate of return to higher education and a lower percentage of highly educated workers in China compared with the corresponding international average that are encouraging for further development. If the Ministry of Education monitors the rate of expansion of higher education, as well as encourages structural educational reform and the relationship with the labor market, it is reasonable to be optimistic about the future of Chinese higher education and the contribution of its graduates to Chinese economy and society.

The matter of improved governance and quality is essentially one of “*change management*” (training, research and skill development, and adaptation of communication technology). It is proposed that an internal technology transfer and networking with ‘mother institutes’ could be a key instrument for the chain of ‘model training centers’ to be set up in the country (reformed, re-built, or completely new ones if necessary) and will be intensified by enhanced networking with industrial clusters and business houses..The issue of linkages with industry and employers is important not only in terms of relevance and quality, but also in terms of financing. Three forms of co-financing are proposed, in which the state can fund the entire programme (‘occupational tracks’ in each institution for 15-20 percent of studies, and one ‘model’ training institution in each district), or share it with employers and other

stakeholders. Finally China's rare inability to consider importing teachers is highlighted. It is time for China to enter the global race for attraction and retention of men and women of talent and skills who are valued and sought after by all nations.

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