6 Education and change in China today

Zhou Guan Qi and Curtis Andressen

Education is a critical component for the development of any society and China is no exception. China’s large population has created particular challenges for the education of its people, and more recently the huge demand for skilled labour due to rapid economic development has made it even harder for the government to maintain an education system that can adjust to the changing times. Moreover, as China engages increasingly with the rest of the world, its standards of education are facing higher requirements and stricter standards. The key questions are, therefore, what does China’s education system look like today? What problems are there with China’s education system and what are some possible solutions?

The development of China’s modern education system

After the establishment of the People’s Republic of China, the Chinese government set out to develop a comprehensive education system that suited a planned economy, formally abandoning the long-established mandarin system based on Confucian teachings. The Cultural Revolution of the 1960s was a massive disturbance for many aspects of Chinese society, and the education system nearly collapsed. Many schools and universities were closed for years. However, in 1977 the university entrance examination system was restored, signalling the beginning of the development of China’s modern education system.

Since the 1980s the link between China’s education system and its ‘Market Economy with Chinese Characteristics’ has been strengthened. In the 17th Communist Party Congress, held in 2007, it was emphasized that ‘Education should be regarded as a priority and human resources are the foundation for China’s development’. Since then the education system in China has experienced a new series of reforms and improvements.

In the 1980s schools, and especially universities, were granted greater autonomy according to the Central Government Decision on Education System Reform (Ministry of Education of People’s Republic of China 1985), and this continued through the 1990s. During this period, vocational education, adult education, degree structures, the national examination system and the graduation system were restructured, and the Compulsory Education Law was issued and implemented. Since 1993, the reform of the education system in China was
furthered with experiments in private education and joint education programmes between Chinese and foreign education institutions. While the government’s investments in education kept growing, increasingly diversified sources of education funds were investigated. A series of laws on education were issued and implemented and an evaluation system of higher education was established. From the beginning of the twenty-first century, detailed aspects of China’s education system were emphasized, such as equality in education, education reform in rural areas, the link between tuition fees and compulsory education and subsidies to education in rural areas. The Students’ Financial Assistance System was also improved during this stage to ensure greater student access to education.

**China’s education system**

After over 30 years of effort, a comprehensive education system has been established in China, with compulsory education in both rural and urban areas, and the development of both vocational education and higher education. In many respects it has been remarkably successful, in particular given the large size and geographically dispersed nature of China’s population (Gu 2011). The Chinese leadership understood the point that education is the key for the development of human resources in China and, linked to this, long-term economic growth and political stability. Indeed, this connection is obvious and probably more relevant today than ever before (Brown *et al.* 2008).

The education system in China is outlined in Table 6.1. In China, nine years of education are compulsory, including six years of primary school and three years of junior middle school. This system has been implemented in both rural and urban areas in China, and is the foundation for the next stage of education reform, namely to divert more resources to minorities, and people living in

<table>
<thead>
<tr>
<th>Higher education</th>
<th>Graduate schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Universities and colleges</td>
</tr>
<tr>
<td></td>
<td>Junior colleges, technical colleges</td>
</tr>
<tr>
<td>Secondary education</td>
<td>Secondary specialized schools</td>
</tr>
<tr>
<td></td>
<td>Vocational schools (junior and high schools)</td>
</tr>
<tr>
<td></td>
<td>Ordinary secondary school (junior and high schools)</td>
</tr>
<tr>
<td>Primary and pre-school education</td>
<td>Primary schools</td>
</tr>
<tr>
<td></td>
<td>Kindergartens and pre-school classes</td>
</tr>
<tr>
<td>Adult education, military colleges, self-learnig higher education, private colleges and religious schools</td>
<td></td>
</tr>
<tr>
<td>Special schools (classes)</td>
<td></td>
</tr>
<tr>
<td>Further education, on-the-job training.</td>
<td></td>
</tr>
</tbody>
</table>

Source: compiled by authors.
Education and change in China today

67

border regions and poorer areas (Lam 2007). At the same time, high school and higher education are also improving, with more government inputs and diversified financial assistance plans.

With industrialization, urbanization and globalization, there has been a massive movement of migrant workers from rural to urban areas. While this labour has been essential to China’s economic growth, migrants and their children do not receive adequate benefits (Pai 2012). Their children’s education is complicated due to limited educational resources in the receiving areas and the resident system (where mobility is regulated and people who move often do not receive proper benefits at their destinations). Special schools should be available to this group if they have difficulty in accessing ordinary schools. In addition, disabled children should also have same opportunity to go to school as do other children.

Moreover, there are in excess of 900 million Chinese living in rural areas, so education in rural areas is a key aspect of China’s education system. In the past few years, a system of tuition waivers has been implemented at the level of nine years of compulsory education, and in some areas subsidies and free textbooks have also been provided to rural students. More teachers were also sent to rural areas through a range of government policies.

Apart from basic education, vocational training and on-the-job training have become increasingly popular in China over the past few years, which also shows the increasing demand for trained labour in China.

In general the education system has been steadily improving since the opening up and reform policies of the late 1970s. Government inputs have steadily increased, and areas such as the examination system, laws concerning education and financial assistance mechanisms have been established or improved. However, while progress is obvious there are still problems challenging China’s education system.

Problems in China’s system of education

Education inequality

Education equality covers a range of issues (such as access for special groups of children), but opportunity for basic education is the starting point for China given its level of development and the types of inequalities that currently exist in the country.

Due to the limitations of public inputs into China’s education, there are still great differences in the quality of basic education among different regions and schools and between rural and urban areas in particular (Rong and Shi 2001). In some regions, especially rural areas, children often cannot gain access to primary education, even though this is compulsory according to law.

After the compulsory education stage, the problem of education equality becomes even worse. In terms of high school education, there are substantial differences with respect to access among different regions and between rural and
urban areas (Hannum and Wang 2006). Moreover, differences in education quality are notable in different schools in the same region, which naturally provides advantages to those who can access a high-quality school. The choice is made based on the level of tuition that a child’s parents can pay and also the relationship that parents have with a particular school. This is often even the case at the middle school level, where education is compulsory. Moreover, there may be a link between government employees and schools, where government officials’ children can access quality schools. Such privileges obviously undermine the principle of education equality.

Students who receive vocational education are normally from families of blue-collar workers or farmers, where incomes are low and children often work to provide an additional income for the family. Graduates from these schools, however, find it difficult to go on to higher education, and therefore their future opportunities are extremely limited.

Higher education also contains inequalities (Bickenbach and Liu 2011). In China, universities and colleges are divided into those that are central and those that are local, and the education quality of the former, which are provided with substantial resources, is, generally speaking, higher than the latter. Also, the central universities and colleges that are concentrated in Beijing usually have lower admittance scores for local candidates, and higher ones for candidates from other cities. China’s residents record system, which largely restricts the free movement of people, is therefore a barrier to education equality in the country.

Education inequality happens most frequently among the groups of children from low incomes and migrant workers’ families. Due to significant differences in income and rapid industrialization and urbanization, this group of children suffers most from inequality in education opportunity.

The examination system

Examinations naturally exert a great influence over students in many countries, both in Asia and the West, but such influence is particularly heavy in China, where access to high-quality education is still limited. The entrance examinations for middle school, high school and university all provide a high level of stress for both children and their parents in China (Liang 2010).

The fact that an examination determines a student’s fate means that it also creates improper motivations and puts tremendous pressure on students (Wong 2012). Take the university entrance examination as an example. The purpose of the university entrance examination is to select the best candidates for universities and to divert education resources to a more capable group of students. Over time, however, the university entrance examination has become dysfunctional (as it has in many other countries). One percentage point can mean a different destiny for a student. The joy of learning disappears, with both teachers and students only focused on maximizing scores rather than on education itself. At the same time the university examination is, for the most part, standardized rather
than localized. This may fit students in some provinces, but definitely not all, so advantages flow to children in big cities. Overall students in primary schools onwards are working on only one thing – improving their test scores. Such an orientation for adolescents is clearly harmful, leading to depression at a young age, poor physical condition and a twisted mindset among youth in China.

**Poor education resources in rural areas**

In rural areas of China education resources are scarce (Stamford University 2012). There is a great shortage of teachers due to poor living and working conditions. In some rural primary schools, the phenomenon of a teacher teaching all subjects to all grades is not unusual. Moreover, many rural teachers are not given adequate motivation, such as proper salaries or benefits, leading to rural teachers leaving if an opportunity presents itself. The shortage of teachers has therefore become the first bottleneck in improving rural education quality.

Most teaching materials in China are designed by educators living in urban areas. Students in rural areas therefore have difficulty in adapting to those teaching materials, and it is almost impossible for rural students to access localized teaching materials. Such incompatibility can be seen from a simple example: primary school teaching materials recently started to emphasize students’ ability to search for information on the internet. But, rural students usually have no access to the internet or any other form of information technology. Also, standardized teaching materials often assume commonsense knowledge that is popular among urban children, while rural children need to absorb this information, and this creates an even heavier burden on both rural teachers and students.

**Problems in the higher education system**

In China the government has a strong influence, indeed even control, over universities, leading to the administrative intensification of universities, bureaucratization of university leaders, and the politicization of higher education in general. Most Chinese university presidents and party secretaries are politicians and bureaucrats rather than educators, suggesting that universities are not really research institutes but rather political organizations. Such an arrangement prioritizes stability over creation, innovation and research in universities, which further leads to weak education quality in universities. From this perspective we can see that the mission of university leaders is no different from that of government officials. Furthermore, such an arrangement of Chinese universities also creates conflict between different schools, departments and staff members due to the demand for power and control, in which research and innovation become increasingly less important.

At the same time, commercialization is also a current trend among Chinese universities. Due to the lack of inputs into education, universities leaders and teachers put greater emphasis on corporate sponsored programmes and degrees that are fully funded by the students themselves. They tend to recruit on the basis
of wealth and focus on increasing the size of universities. Such motivations impede the function of creating and spreading knowledge, which further weakens the higher education system in China.

**Inadequate inputs into education**

Since the opening up and reform policies of 1978, rapid economic growth in China contributed greatly to the increase in government revenue, which in turn became one of the important conditions for education development. With rapid economic growth, people’s incomes also often kept growing, which led to a stronger demand for education. From 1999 onwards, Chinese universities started to substantially increase recruitment, which dramatically increased enrollment rates but not necessarily education quality. In the past few years higher education in China has faced problems of low education quality, heavy debt, significant financial burdens for students, and an increasingly high ratio of students to teachers, relating in one way or another to inadequate inputs into education (Tu 2011).

The percentage of a country’s GDP spent on education is regarded as one major indicator of a country’s education inputs, a reflection of the priority placed on education as well as a country’s wealth. The global average is 4.9 per cent, while developed countries are 5.1 per cent, and underdeveloped countries are around 4.1 per cent. In 1993, 4 per cent was set as China’s goal, to be achieved by the year 2000. Such a goal is lower than that of the average for underdeveloped countries, but China had difficulty reaching it. It was only in 2012 that 4 per cent of China’s GDP, for the first time, was spent on education, 12 years behind schedule. According to the State Statistics Bureau, from 1992 to 2007, the proportion of GDP spent on education was above 3 per cent only in 2006 and 2007, with lower percentages for the other years. In 2010, the proportion reached 3.66 per cent, and 4 per cent was only achieved in 2012 (Yue 2010).

**Brain drain**

With increasing globalization, the movement of skilled labour across borders is an obvious fact. By 2005, approximately 191 million people were living in a foreign country, accounting for 3 per cent of the global population, and this rate is increasing (United Nations 2006). Such transnational movement is one of the key supports of global economic development, behind which is the competition for skilled labour. This is clearly disadvantageous for developing countries, including China.

In the past few years an increasing number of Chinese students have been going abroad for further study, not only for MA or Ph.D. degrees, but also for undergraduate qualifications. According to data from the American National Association for Foreign Student Affairs, there were 98,510 Chinese students studying in the United States in the academic year of 2008–2009, which was a 21 per cent increase compared to the previous year. In 2005 the figure was only about 50,000, and the increase in undergraduate students was the greatest (New
Education and change in China today 71

York Times 2010). Chinese students are not only going to famous foreign universities, but also to regional and even community colleges.

Studying abroad is, of course, usually very positive, but most Chinese students, especially those with excellent results, are pursuing a goal of gaining permanent residency abroad. The trend today is that the higher the degree Chinese students hold, the less likely they are to return to China. According to the American Department of Homeland Security, Chinese students comprised the largest group of overseas students in the United States, and 33 per cent were pursuing Ph.D. degrees in 2010. China is training these people, but they leave for higher degrees and most do not return (Wang 2011). In 2008 a metaphor was made in the journal Science that Tsinghua University and Peking University were fertile training centers for Ph.D. students going to the United States. Moreover, many outstanding Chinese universities are transferring talented graduates to the United States and other developed countries. In 2006 alone, Tsinghua University and Peking University ‘sent’ 571 and 507 Ph.D. graduates, respectively, to the United States (Wang 2009).

To sum up, the exodus of students from China contains the best and the brightest – some of the elite of China’s education system (Zhang 2010). This is, obviously, a waste of China’s education resources, and a threat to China’s future development.

Solutions to problems in China’s system of education

Education is clearly a crucial part of the foundation of a country’s future development. The education system is also an indicator of the long-term sustainability of a country. Many Chinese have experienced the advantages of rapid economic growth, but such a trend can hardly be maintained if education is not continuously supported. Faced with problems appearing in China’s education system over recent decades, solutions are neither easy nor quick. But, some possible solutions are presented below.

Reducing education inequality

Adequate funding of education is generally seen as the most important factor for reducing education inequality. At the same time, the variation in access to education between urban and rural areas, and between different regions, should be eliminated in order to promote education equality. Central and provincial transfer payments should be diverted to non-compulsory, vocational education, and education in general, in poorer areas. The tuition system should be adjusted to take into account the income levels of local families.

A financial assistance system for vocational education in particular, and rural areas in general, in the western parts of China should be established and a boarding school system promoted in rural areas where transportation and communication systems are rudimentary. Donations from private individuals could be encouraged, together with loans from development banks and other policy
oriented banks to help fund the education of poor students. Meanwhile, children of migrant workers should also be supported by local governments at their destinations, providing them with equal access to school. Special financial assistance should also be provided to children with disabilities.

**Modifying the examination system**

The fundamental basis of the examination system in China should be changed from being ‘knowledge-focused’ to ‘ability-focused’, emphasizing students’ ability to apply knowledge rather than only memorize it. This approach gives students a foundation for solving practical problems. Universities should have greater autonomy to select candidates. At present most universities in China still follow the university entrance examination system, though a diversified selection process is now being applied. Universities should be equipped with the ability to design majors, and establish their enrollment levels as well as the percentage of students they accept from different regions. Most highly ranked international universities have the autonomy to set their own standards.

Entrance examinations could also be held multiple times each year to offer more opportunities to candidates. Normally there are at least two examinations per year in many developed countries: one is a national examination, and the other is organized by the university itself. Countries like Britain and Japan use such a model. In the United States, the Scholastic Assessment Test (SAT), often viewed as a type of entrance examination, can be taken by a student up to three times after they pay for it, with 46 SATs available all year round. After taking the test, a student can use his or her highest score to apply for university.

Chinese students can only take the entrance examination once per year, which means that three hours of examinations will determine their future. There are also associated issues of corruption in the education system, which undermines education quality and equality. In China, personal relationships are critical in every aspect of one’s life, and the examination system is no exception. The examination system is a time- and cost-efficient method for selecting students, but without fairness, good design and adequate regulation the examination system will not fulfill its intended purpose. So its reform in China is crucial.

**Improving rural education**

The effect of low economic development level, scarcity of information and traditional cultural all lead to one result: schools in rural areas are substandard. Few teachers are motivated to stay in rural areas. Teacher scarcity is also reflected in the fact that one teacher often teaches all subjects and grades, which is extremely demanding. The problem is that poor education quality and teacher shortages can form a vicious cycle, with the result of stagnating or declining quality of education in rural areas. Therefore, proper motivation to attract and keep teachers in rural areas is one of the keys to improving quality and long-term development.
At the same time, teaching materials in rural areas should fit with local themes, concerning farmers’ lives, the role and function of agriculture, local culture, local village development issues and so on. Focusing on such themes can increase students’ interest on one hand, and making teaching materials pertinent to their backgrounds may produce better education results on the other. Meanwhile, some practical farming techniques could also be included in teaching materials for high school students, such as the repair of agricultural machinery, grafting fruit trees or methods for protecting the local environment.

**Modifying the system of higher education**

De-politicization means that the management model of universities should be changed from being based on politics (i.e. personal connections), to being based on rules. Complete de-politicization in any country is almost impossible, but the existing system in China produces low efficiency and generates many other problems.

In fact, the modern higher education system in China is highly politicized. The key issue is that higher education is turning into a tool of political control, with the management and policies of a university being largely decided by only one person or a small group. Moreover, presidents and other university leaders often think more about political achievements instead of academic research, and this focus spills over into the broader academic community. The result is often the case that scholars in China are more famous for their political comments than they are for their academic performance.

Lessons can be learned from Europe in this respect, where church and education were separated. Centuries ago Europe’s higher education institutions were part of the church (consider Oxford University as an example), with the church maintaining strong control over the university. As time went by such a system lowered the quality of higher education, and a need for separating education and the church became apparent. In China separating education from political control will no doubt be a long and painful process, but it is ultimately necessary if China is to achieve a high-quality system of education.

At the same time, it is also arguable that it is necessary to limit the power of bureaucrats in the higher education system. Higher education requires talent rather than a political focus to manage universities, though this may be labelled as naive on the one hand and moving in the opposite direction from Western universities on the other. In short, this is no doubt a difficult though ultimately worthy goal.

De-commercialization is also necessary in China’s higher education system. University presidents and other senior staff often focus on fund raising, and universities in China are increasingly looking like businesses. Such an approach tends to weaken the motivation for staff to conduct research and this ultimately affects their teaching and broader role of advancing knowledge. In China the major goal of universities, to create and promote knowledge, is almost gone, being replaced by a commercial purpose.
Increasing inputs into education

Funding education is a kind of fundamental and strategic investment, and is the key material foundation for education development. Inputs into education should be adequate and transparent. Proper monitoring should also take place to ensure the legitimate utilization of limited resources, to improve efficiency and strengthen management.

Slowing the brain drain

Human resources are vital for the development of China. China’s rapid economic growth has been based primarily on (low-level) human resources, and this focus should be moved to a greater emphasis on knowledge. This is a key for China to develop a vibrant economy in the long term and to become a real international power. An open and effective human resource model is needed in China, where outstanding Chinese students can go abroad for specialized education, but more importantly are encouraged to return.

In 2010 the National Medium and Long Term Talent Development Plan (2010–2020) was initiated, which included many policies for encouraging outstanding graduates to return to China. For example, when talented students return from their studies abroad, they will be treated preferentially in many respects, including their residency, tax, insurance, housing, and children’s education. They will also be given priority in terms of leading important research programmes (People’s Daily 2010).

Other mechanisms should be designed to attract foreign talent as well, such as good incomes, tax incentives, support for research and so on. In a global system China has to compete with other countries to attract high-level human resources.

Conclusion

It is clear that education in China is critical for the country’s development, as it is in other countries. It is also apparent that in some respects China’s system of education has been very successful. In the twentieth century China experienced the end of its dynastic system, civil war, war with Japan and the establishment of the People’s Republic. China’s system of education had to adjust to all of these massive changes.

Near the end of the twentieth century the fundamental basis of China’s economy also underwent a seismic shift, from a planned to a capitalist system. It is hard to underestimate the demands that this has placed on China’s system of education. In the shifting of its role and the increased stresses that have been places upon it, it is understandable that problems have become apparent. It would be surprising if this were not the case, particularly given that this basic change has taken place only within a few decades.

The rapidity and depth of these changes, however, have produced side-effects, some of which are undesirable. It is therefore time to pause and correct problems
and imbalances within the system of education so that China can move ahead to a brighter future – one in which the talents of each Chinese child can be fully developed, and where strains within China’s social fabric during the shift to a capitalist economy can be reduced. China once produced world-class academics and innovators and there is no reason it cannot do so again. Reforming the education system is therefore a worthy and indeed necessary goal.

Bibliography


