Science, Technology, Education and Health News from China

Number 118 – April 2014

Please note that the previous newsletters can be downloaded from the website of the Embassy of Switzerland in China: www.eda.admin.ch/beijing¹. To subscribe/unsubscribe or send us your comments, please send an email with the corresponding subject to chenchen.liu@eda.admin.ch.

Introduction
The Story of the Month presents the recent launch of a new MOOC platform in China and the plan to develop MOOC-based degree programs in Shanghai. In education, the Melbourne and Tsinghua University are about to establish a virtual campus. Universities begin new recruitment system as part of the education reform in China. In science and technology, China has issued its first space activity assessment report. China is to develop Linux-based OS system after Windows XP shutdown. In health, China’s healthcare reform poses risks and opportunities for foreign firms.

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¹ Please click on the blue texts to activate the hyperlinks to either email addresses or related websites.
MOOCs-based Associate Degree to Start in Shanghai

www.cnmooc.org, a Massive Online Open Courses (MOOC) platform developed by Shanghai Jiaotong University was officially launched in April in Shanghai. It is a government-supported initiative aiming at pooling good quality Chinese-taught courses from leading universities. 10 courses offered by 4 universities in the mainland, Hong Kong and Taiwan were launched in the first stage.

CNMOOC is not the first Chinese MOOC platform. Tsinghua University launched its official MOOC platform xuetangx.org in October 2013. Tsinghua university courses in a broad spectrum of areas had been made available online. Several pro-profit MOOC providers in China are also active, such as the internet portal NetEase.com (partnership with courser) and the paid online course provider kaikeba. The Shanghai Jiaotong University-led initiative, however, stood out by being the first MOOC platform that will be integrated in the blended learning of 19 universities, all located in southwestern Shanghai.

These 19 universities have entered into a partnership in 1994 with the purpose of pooling education resources together for the benefit of students. Under the partnership framework, students enrolled in any of the 19 universities are offered opportunity to register for courses, enroll in summer programs or to make an associate degree at other member universities.

According to the cooperation agreement signed on occasion of the launch ceremony, member universities will coordinate and co-develop MOOC courses based on each member universities unique competences. Students are required to register with officially certified student ID, to complete online learning sessions, to attend flipped classroom sessions organized by the course provider and to take final examination offline. Credits gained through completing courses on CNMOOC platform would be recognized by all universities. Quality assessment and control of the MOOC is done by a coordination committee of the southwestern Shanghai university partnership.

Member universities are also working towards developing MOOC-based associate degree programs. The associate degree is expected to be a 3 year paid program where courses are completely finished online in combination with offline activities. Thesis is to be submitted either online or offline. According to the associate degree admission plan 2014, Shanghai Jiaotong University announced that it will start with the first of such associate degree in law from spring semester of 2015.

According to Dr. YUAN Si, Vice President of Tsinghua University, the Tsinghua-led xuetangx.org is also moving towards the direction of recognizing MOOC course credits among member university of C9, an alliance of 9 top universities in Beijing. Although no concrete steps yet, “[the recognition of credits] should not be a problem”, said YUAN on an interview session during the launch of xuetangx. The next steps of Tsinghua University are to further incorporate MOOC in their offline degree program and to extend MOOC as preparatory studies possibilities for senior high school students.

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2 Member universities include: Shanghai Jiaotong University, Donghua University, East China Normal University, Eastern China University of Science and Technology, Shanghai Theatre and Drama Academy, Shanghai Music Academy, Shanghai Institute of Technology, Shanghai Business School, Shanghai Normal University, Shanghai University, Shanghai TCM University, East China University of Politics and Law, Shanghai University of Engineering Sciences, Shanghai Lixin University of Commerce, Shanghai Dianji University, Shanghai University of Politics and Law, Shanghai Jianqiao University, Shanghai Institute of Foreign Trade and Shanghai Second Polytechnic University.

News

1. Melbourne and Tsinghua establish virtual campus

(Universityworld, 02-04-2014)

A cloud-based 'virtual' campus will be established between Melbourne University and Tsinghua University following the signing of an agreement between the heads of the two institutions.

A Melbourne release said the ‘C-Campus’ agreement would enable joint classes and ‘e-subjects’ to be offered to students at both institutions, starting with advanced courses on separation science and technology in chemical engineering. It would also function as a platform for research collaboration across disciplines, including chemical engineering and medicine initially, with more disciplines to be added progressively.

This is the second c-campus to be set up by Tsinghua, which signed an agreement with Sweden's Royal Institute of Technology in 2012. “To respond to the strong trend of online education, c-campus is a new attempt to make use of virtual technologies and share the elite courses between Tsinghua and its prestigious partners in the world. We are pleased to make it happen with Melbourne,” said Professor Chen Jining, president of Tsinghua University.

Professor Zhang Yi, Tsinghua's Vice-provost, said the 'c' in c-campus has multiple connotations, from cloud learning to cooperation, cyber innovation and cross discipline. "It is an advanced model for real-time interactive e-teaching, e-learning, e-seminars and other web-based activities, which will be of great benefit to international cooperation in a more convenient and effective way."

Both universities have committed to establish seed funds to stimulate further joint research and innovation in online learning. The agreement expands on a 25-year history of collaboration between the two universities and a 2013 agreement that provides for joint PhD degrees, the first time Tsinghua has partnered with an Australian university on a university-wide PhD agreement.

Melbourne Vice-chancellor Professor Glyn Davis said the c-campus would provide new opportunities for both universities: "This agreement will act as a platform to support Tsinghua-Melbourne cooperation across research, education and innovation, and support the implementation of new web-based learning tools. We've been very pleased with the existing work we have done with Tsinghua University, such as that led by Professor Peter Scales and the Australia-China Joint Research Centre on River Basin Management. This new agreement is an exciting next step."


2. China health care reform poses risks and opportunities for foreign firms

(SCMP 09-04-2014)

China's health care reforms present opportunities and challenges to foreign health care firms, according to speakers at a recent hearing of the US-China Economic and Security Review Commission, a United States government agency that advises Congress on Sino-US relations. "China's health care reform has generated demand for more and better health care, with opportunities for private and overseas investment," said Huang Yanzhong, senior fellow on global health at the Council on Foreign Relations, a US think tank. He also mentioned at the hearing in Washington that with annual sales of US$71 billion, China is the world's third-largest market for pharmaceuticals. As the annual growth rate of sales in the country is between 15 per cent and 20 per cent, twice the growth rate in the US, China is poised to become the second-largest market by next year. McKinsey, a US management consultancy, estimated China's health care spending would grow from US$357 billion in 2011 to US$1 trillion by 2020.
The country's market for over-the-counter and branded generic drugs will leap from US$23 billion in 2010 to over US$369 billion by 2020, said Benjamin Shobert, managing director of Rubicon Strategy and senior associate of the National Bureau of Asian Research. "If this holds, China will become the world's second-largest pharmaceutical market, following the US. Reflecting these realities, US life science companies have made China a central part of their growth plans."

On March 25, Premier Li Keqiang announced that health care reforms would be deepened this year. More play would be given to market forces, while public health care services would be strengthened. Efforts would be made to provide universal health insurance, while restrictions on foreign investment in mainland health care companies would be reduced. Health care services would be extended to remote rural areas, while the government would apply pressure to prevent drug prices from rising excessively.

A policy statement by the National Development and Reform Commission in October called for more private-sector involvement in China's health care services. According to Xiaoqing Lu Boynton, director of Albright Stonebridge, an international strategy company, the government's aim to expand health care coverage in rural areas meant potentially vast markets for foreign firms in the sector. "For US pharmaceutical and medical device companies, expanded health care coverage could prove to be an opportunity to increase exports to China."

Boynton said, citing the bribery scandal involving GlaxoSmithKline (GSK), the largest British drug firm that erupted last year. Other multinational drug firms, such as Sanofi, have also been probed by Chinese authorities. "The anti-corruption investigations in the health care sector serve the reform goal to rein in costs of drugs and health care products, which are believed to be critical to stimulate domestic consumption." Following the highly public scandal, GSK announced last year that it would lower the prices of its products in China. Boynton warned that companies in the pharmaceutical and medical device industries would face heightened scrutiny of their operations and pricing practices in the near to medium term. "The heightened scrutiny of the health care sector, which is expected to continue in the coming months, will make the China market more complex. It is important for foreign companies to focus on their compliance efforts to minimize risks."

Shobert said: "China is in the midst of a once-in-a-generation expansion of its health care system. The country is making massive investments in every facet; hospital and primary care infrastructure is being built at a torrid pace, a national insurance plan has been rolled out that covers almost everyone in the country. "Yet most, if not all of these additional investments are being built on top of a weak foundation. Doctors are chronically overworked and underpaid. Hospital administrators struggle to meet shortfalls between government reimbursement and increasing costs." The revenue shortfall has caused Chinese hospital administrators to incentivize doctors to prescribe unnecessary drugs and surgery. "Doctors have supplemented their paltry incomes through the sort of bribes the GSK scandal has exposed."

Shobert also declared that surveys of US and European companies with significant investments in China have found growing concern over what these firms perceive as an environment that is less hospitable towards growing market share. "Many [foreign] businesses believe they are being held to higher regulatory standards by China's ministries than their Chinese competitors, a frustration that seems more explicit and intense than in previous years." According to him, China's regulators should apply equal attention to domestic players and make them more accountable, like multinationals.

He warned that unless the government revamps reimbursement practices that cause revenue shortfalls in hospitals and low pay for doctors, the only effect of the GSK scandal would be to push corrupt practices from manufacturers to distributors, sales representatives and dealers.

3. **Universities begin new recruitment system**

(Xinhua, 20-04-2014)

Zhejiang University, considered one of the top universities in China, is bringing in a new freshman recruitment system this year, in which the national college entrance exam will no longer be the only assessment.

The "trinity system" will combine candidates' performance in high school evaluation tests during 3 years of high school studies, recruitment interviews by the university and the national college entrance exam. The national college entrance exam, known as gaokao, which used to be the sole assessment for Chinese high school graduates for university enrollment, will account for 60 percent in the trinity system. High school grades will account for 10 percent and interview scores will make up the remaining 30 percent.

The latest move is seen as another major step by the university following its introduction of independent recruitment in 2003, said Lu Guodong, acting dean of the university's undergraduate school. He said the trinity system is designed for students who are truly interested in and show potential for specific majors. "We have seen too many students who enrolled in college with high scores but lost their goals afterwards. We hope this system can pick some excellent students who already have a clear idea of their future majors and remain dedicated to them."

The university plans to recruit 100 freshmen for 17 majors through the new method. The 17 majors include Philosophy, Russian, International Politics and Port, Coastal and Technology Engineering. On April 19, 282 students across the province attended interviews held by these departments.

Last year, the university recruited 2,300 undergraduate students from Zhejiang province. Yu Qiongjie from Zhoushan Middle School interviewed for a place in the School of Medicine. The 17-year-old said the interview was not as difficult as she had imagined. "There were no professional questions. Instead, all the questions were about latest issues and trends that are associated with hospitals or doctors." She said the topic of the group discussion was an old Chinese saying that if one cannot be a good prime minister, he or she should become a good doctor. "I am quite confident about my performance in the interview," she said. "And I like this form of examination because we are not evaluated by only one exam. Professors will know us in person rather than through mere scores of the national college examination."

Chen Zhi, deputy dean of the university's school of medicine, agreed: "Unlike other majors, our major has a very specific and clear career goal - being a doctor. Career ethics are essential for doctors and we need to have a full knowledge of our future students and whether they have sympathy for other people and are decisive enough when facing complicated situations."

In addition to Zhejiang University, 34 other universities in Zhejiang province, as well as Shanghai Jiaotong University, will also recruit freshmen through the trinity system.


4. **China developing Linux-based OS after Windows XP shutdown**

(Xinhua, 23-04-2014)

China will focus on the development of a new operating system (OS) based on Linux to cope with the shutdown of Windows XP, an official said on April 23rd. Zhang Feng, chief engineer of the Ministry of Industry and Information Technology (MIIT), said "the ministry will beef up support for the development of such an OS."

Microsoft ended the support for the 13-year-old Windows XP on April 8th, 2014 and advised users to upgrade to Windows 8 or get a new PC if necessary. About 70 percent of Chinese personal computers,
even in critical sectors like telecommunications, are still running Windows XP. "The shutdown will bring risks directly to China's basic telecommunication networks and threaten its overall security," said Zhang.

In February, Tencent, Kingsoft, Sogou and other Chinese Internet service providers said they would provide technical assistance for Windows XP users to upgrade systems and guard against risks. Zhang advised individual users to install Chinese-made shield software to fend off possible online attacks or information leakages.

Linux is an OS assembled under the model of free and open source software development and distribution. It is a leading OS on servers, mainframe computers and super computers. It is estimated that Linux has a market share of less than 1.5 percent worldwide, after nearly 91 percent for Windows and some eight percent for OS X.


5. **China Issues First Assessment on Space Activities**

(Xinhua, 17-04-2014)

A leading space research group in China released the country's first assessment of the current situation and future trends of international space activities on April 15. The report was compiled by the research group of the Qian Xuesen Laboratory of Launch Vehicle Technology (CALT). The report showed that space activities have flourished in recent years. Big space powers led in terms of satellite launch attempts and in-orbit assets.

Modern facilities and equipment used in space activities are mostly owned by leading space powers. So far, 12 countries have gained the ability to launch satellites independently, said the report. Of the 159 launches that took place between 2012 and 2013, 86.8 percent were conducted by 4 leading powers, including Russia, the United States, China and the European Union. There were an estimated 1,084 satellites in orbit by August 2013, according to a calculation by the research group based on figures from the Union of Concerned Scientists. A total of 461 satellites are independently owned by the United States. Russia had 111 and the European Union possessed 110.

The three powers had 63 percent of global space assets, said the report.

Li Hongbo, a member of the research group and an expert with the China Academy of Launch Vehicle Technology (CALT), warned of a trend toward using space for military purposes that has emerged in recent years. "Current international laws and regulations have been ineffective to contain it," said Li. The research group called for peaceful exploration and utilization of outer space. The research group worked under CALT, which is part of the China Aerospace Science and Technology Corporation.

(http://usa.chinadaily.com.cn/epaper/2014-04/30/content_17477503.htm)

6. **Postgraduate studies shunned as free tuition scrapped**

(Universityworld, 01-05-2014)

The Chinese government's decision to scrap free tuition for postgraduate studies – including masters degrees and PhDs – is driving more graduating students to enter the job market instead of remaining in higher education. The trend is likely to intensify the graduate unemployment problem in the country this year. Free postgraduate studies come to an end at centrally funded universities in China from the 2014 academic year that starts in September.
Despite government announcements of new financing arrangements for some students, postgraduate applications have seen a sharp drop. The changes will mean that the proportion of the record 7.27 million graduates looking for jobs will rise. The government has also this year removed the age cap on students in postgraduate studies, which was previously limited to students under the age of 40. Even so, the total number of postgraduate applicants this year is down by 40,000 compared to 2013, based on the number of students who took the national graduate school entrance examination in January.

A number of provinces have recorded their first drops in postgraduate applications for at least five years. Beijing has seen 20,000 fewer applicants compared to 2013, according to official figures released earlier this year. Beijing institutions are already seeing more applicants for their professionally oriented graduate programs – 38.3% of all postgraduate applicants, compared to 14.3% in 2010 – an indication that graduates are looking to enhance job prospects rather than undertake postgraduate degrees as a matter of course. Previously enrolling for a master degree in Beijing was a passport to coveted city residency or houkou. But unofficial announcements have suggested a new age limit for graduate students qualifying for a houkou set at 27, deterring a rush to Beijing by older postgraduate students.

In 2012, 17.5% of graduates continued their studies at a university in China and 7% went to a university abroad, according to a survey of 52,000 students nationwide by online recruitment company Zhaopin.com. This had dropped to 14.5% continuing at a Chinese university and 5.4% going abroad, in Zhaopin.com's latest annual survey carried out in April.

Tuition fees for a master degree will be around CNY8,000 to CNY10,000 (US$1,300 to US$1,600). The government experimented with the new postgraduate fees at a number of universities in 2007 including Peking and Tsinghua. Greater autonomy to set postgraduate fees will now be extended to all 113 centrally funded universities. The total number of students in postgraduate education will be limited to 450,000 in a bid to maintain quality, after steep rises in numbers over the past decade led to complaints by employers about the declining quality of candidates.

Although government media has reported that a new financial aid system will be put in place, details are scant and students on China's social media site Weibo have dismissed promised scholarships as 'empty rhetoric'. Lack of information appears to have dissuaded many poorer students from enrolling this year, according to Weibo posts. Students may also have been dissuaded by reports that postgraduate qualifications do not necessary give candidates an advantage in the jobs market.

Education ministry statistics in 2012, which dictated the current rule changes, showed that the employment rate of postgraduate students was lower than that of graduates for several consecutive years, indicating a possible glut in the postgraduate market. While the number of PhD students has risen, the number of research jobs has stagnated. In many cases, because of the government's various world-class university initiatives, top universities prefer to recruit academics with PhDs from highly ranked universities overseas than from local universities, further reducing the number of quality jobs for postgraduates.

Anecdotal evidence suggests that employers believe postgraduates demand unrealistically high salaries. According to the Chinese College Graduates’ Employment Annual Report, the average monthly wage of a postgraduate's first job was CNY4,500 (US$720) in 2012, while more than 52% of respondents expected it to be at least CNY6,000, said a recent survey published on the education portal eol.cn.

(http://www.universityworldnews.com/article.php?story=20140501121329330&query=china)
Swiss Day at Tongji University  
Date: May 23rd  
Place: Shanghai  
Contact: Swissnex China

Swiss Week at Shanghai  
Date: May 29th to June 2nd  
Place: Shanghai  
Contact: Swissnex China

Swiss Day at Beihang University  
Date: June 12th  
Place: Beijing  
Contact: Embassy of Switzerland in China

Swiss Universities Academic Expedition in China  
Date: fall 2014  
Contact: Swissnex China

China Education Expo  
Date: October 25th to 26th  
Place: Beijing  
Contact: Embassy of Switzerland in China

CAS Grant for International Scientists  
http://www.iiebeijing.org/cas/cas.html

Smart Energy: 4th National One-day Conference  
Date: September 5th 2014  
Place: Domaine des Iles, Sion (Switzerland)  
Contact: www.theark.ch/smartenergy