Science, Technology and Education News from China

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Please note that the previous newsletters can be downloaded from the website of the Embassy of Switzerland in China: www.eda.admin.ch/beijing[1]. To *subscribe/unsubscribe or send us your comments, please send an email with the corresponding subject to* chenchen.liu@eda.admin.ch.

Introduction

This month starts with an overview of the current status of College Entrance Examination in China and gives a comment on the increasing number of students giving up on Chinese higher education. In this month, Chinese State Councilor LIU Yandong proposed education integration with ASEAN countries, International Standardization Organization adopted standards on "Internet of Things" proposed by China. A major Climate Change Study program debuted in Qingdao. Shanghai has been selected as an Innovation Model. With the new school and university years starting in September, this month's edition also looks at current problems in Chinese education, such as low quality ph.d candidates and examination scams.

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Contact

Markus Reubi
Science & Technology Counsellor
Embassy of Switzerland in the People's Republic of China
Tel: +86 10 8532 8849
Email: Markus.Reubi@eda.admin.ch
www.eda.admin.ch/beijing

[1] Please click on the blue texts to activate the hyperlinks to either email addresses or related websites.

Policy

College Entrance Examination: Loss of University Applicants

September is a new beginning for China's **9.46 million high school graduates**, who took College Entrance Examination (CEE) in July. They are competing for **6.57 million slots in Chinese universities** and for the opportunity to receive higher education. 2010 sees Chinese universities ready to admit the largest number of freshmen. However, this year also expects the largest number of high school graduates who actually voluntarily skpped the examination.

The number of high school graduates taking the examination reached a peak in 2008 (10.5 million) and then witnessed a continuous drop (10.2 million in 2009, 9.46 million in 2010) while the university admission rate grows steadily (57%, 62% and 69% respectively)[2]. 840,000 high school graduates skipped the examination in 2009[3], and it is predicted that this figure will rise to about 1 million this year.

Among all provinces and municipalities, the **number of college entrance examination registration in Beijing is now in its fourth year of consecutive decrease**. In 2010, the number of registration has fallen by 20%[4], which brings the admission rate of Beijing to 80%. A similar situation also occurs in heavily-populated province of Shandong, where examination registration falls by 40,000 students while admission rate grows to 80%[5].

The reasons for such examination drop-outs are multi-fold. According to the Minsitry of Education, **demographic change** is the most important factor. Data from National Statistic Bureau shows that from 2008 to 2010, the number of high school graduates stood at 8.49 million, 8.34 million and 8.03 million respectively[6]. Policies released by the Ministry of Education discouraging "**returned students** (high-school graduate who choose to stay another year at high school in order to re-take the examination next year)" have effectively limited the number of returned students, which used to account for a visible part of examination registrations[7]. Meanwhile, for students from well-off families, **studying abroad** (including Hong Kong) has increasingly become a popular option. For other students, the expensive tuition fee and the serious employment problem for university graduates have made higher-education **much less cost-effective**.

The implications of such decrease for education in China are still up for debate. For Chinese students, **access to higher education is now becoming less and less difficult**. For higher education institutions, they have enough reason to reform and improve as now **universities have to compete for applicants**. Some also predict that higher admission rate of higher education will make the life of vocational education institutes more difficult. According to the recently released *National Outline for Medium and Long Term Education Development*, the future of college entrance examination is definitely subject to change, although the formality will most probably stay.

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[2] China Education Online, http://www.eol.cn/html/g/gkbmjs/

[3] This figure is made on the basis of the number of high school graduates and the number of registration for college entrance examination, both released by Ministry of Education.

[4] http://edu.sina.com.cn/gaokao/2010-06-04/1018249525.shtml

[5] http://gaokao.eol.cn/html/g/bmsj/index.shtmlShandong

[6] http://gaokao.eol.cn/kuai_xun_3075/20100126/t20100126_444891.shtml

[7] According to *China Youth News*, in 2007, 2.89 million students among 10.1 million students taking the examinations were "returned students".

News

1. Chinese State Councilor Proposes Integrated Education with ASEAN Countries

(Xinhua Net, 03-08-2010)

Chinese State Councilor Liu Yandong makes a keynote speech at the opening ceremony of the first China-ASEAN Education Minister Roundtable Conference and the third China-ASEAN Education Cooperation Week in Guiyang, capital of southwest China's Guizhou Province, Aug. 3, 2010. Liu Yandong proposed on Tuesday that China and the Association of Southeast Asian Nations (ASEAN) study the feasibility of educational integration at a proper time to ensure the supply of skilled people for the development of the China-ASEAN Free Trade Area.

[…]

According to Liu's key-note speech, China and ASEAN should make efforts to integrate their educational resources, remove obstacles preventing student exchanges and encourage the recognition of academic degrees conferred in respective countries, so as to enhance the attraction and competitiveness of higher education in the region. The two sides had established a comprehensive partnership of cooperation in education and developed new methods of educational exchanges with regional characteristics.

Liu also called for the implementation of the two China-ASEAN 10,000 Student Exchange Programs, making sure that the number of exchange students from ASEAN countries to China reached 100,000 by 2020 and vice versa.

2. Chinese Made International Standard for "Internet of Things"

(Most,10-08-2010)

International Organization for Standardization (ISO) published an official standard for the RFID cargo shipment tag system. The standard is the first standard proposed and formulated by China and issued officially by ISO for logistics and the Internet of things. According to the officials of the Standardization Administration of China, the ISO/PAS 18186: RFID cargo shipment tag system, is prepared based on a Chinese national standard for the container e-seal technology applied in supply chains monitoring (GB/T23678－2009). The standard is designed to facilitate the diffusion of container e-seal technology featured with low cost, enhanced safety/reliability, and easy operation, desirable for raising the safety of international containing shipping.

As an integration of RFID and internet technologies, the new system is able to provide real time containers status to users, allowing them to keep abreast of, rather than 'be told' of the status of container shipping, desirable for raising the safety and efficiency of container shipping.

3. Climate Change Study Started in Qingdao

(People's Daily, 13-08-2010)

Ocean-atmosphere processes over the Southern Ocean and Indian Ocean and their impacts on climate change in East Asia and in the globe, a major national global change study, was kicked off on August 13, 2010 in Qingdao. The project is designed to study Asian monsoon systems that affect the climates in China, in an attempt to understand the break-up, development, and interannual variation of Asian monsoons from the angle of ocean-atmosphere interactions, raising China's short range climate prediction, and disasters prevention/ preparedness capability. Researchers will enhance field observations along the sections from the Southern Ocean to the Indian Ocean, and further to East Asia, working on theoretical studies and climate prediction modeling. They will also study the major mechanisms through which the ocean-atmosphere processes over the Southern Ocean and the Indian Ocean affect the floods and long term climate change in China, improving the dynamic and statistic part of short range climate prediction models, and raising the accuracy of predictions.

4. Shanghai to Become Innovation Model

(MoST, 20-08-2010)

A range of government agencies, including Ministry of Science and Technology, Ministry of Finance, and Ministry of Education, have recently worked together to launch a nationwide campaign for technology innovations. Shanghai has been made an experimental site for the innovation initiative.

By 2012, Shanghai is supposed to create a technology innovation system dominated by industry, and guided by the marketplace, taking advantage of the combined strength of industry, universities and research institutes, with a noticeably raised public awareness of innovation. As a result, Shanghai's R&D expenditure will hit 3.0% as a proportion of its GDP, with an industrial R&D expenditure at 70%, substantive breakthroughs in key and core technologies, per million person/year invention patent grants reaching 245 in number, a proprietary technology possession rate at 32%, and accelerated commercial applications of new technologies. By that time, Shanghai's major high tech industrial output will reach RMB 1.1 trillion (USD 160 billion), with a raised proportion of total industrial output up to 30%.

To achieve the aforesaid targets, Shanghai will strengthen the efforts in the following 9 areas, in line with national strategic missions and commercial applications of high technologies: 1) incubate more innovation enterprises. By 2012, innovation businesses in Shanghai shall reach 500 in number; 2) establish strategic alliances for technology innovation. By 2012, technology innovation alliances shall be established in 60 areas, including large airplane, semiconductor illumination, laser display, electronic tagging, next generation broadcasting and TV network, new energy, intelligent power grid, new energy autos, antibody drugs, medical instruments among many others; 3) establish and perfect industrial technology innovation service platforms. By 2012, 15 national and municipal service platforms will be established for industrial technology innovation activities, raising the efficiency of technology innovation; 4) strengthen the capacity building of technology innovation contingents; 5) establish an S&T banking system, allowing the banking industry to play a role in supporting innovation businesses; and 6) establish high tech industrialization bases and innovation parks, accelerating the construction of Zhangjiang Proprietary Innovation Demonstration Park, and Yangpu as an innovation district.

5. Ph.D in China: Large in Numbers and Low in Quality

(Xinhua Net, 26-08-2010)

With a rapid increase in the number of Chinese graduates enrolling in PhD programs in the past decade, it seems the quality of education doctoral students receive is falling short.

About 70 percent of employers complain that employees who hold PhDs show little innovation in their work performance, according to a recent survey, which interviewed 1,392 PhD candidates, degree holders, professors and employers.

[…]

China replaced the United States to become the world's top producer of doctorate holders in 2008, according to an Asia Times report.The number of PhD students in China reached 246,300 in 2009, about five times the figure in 1999.

The massive enrolment of PhD students has resulted in a severe shortage of qualified professors. Almost half of the professors polled admitted each of them had to supervise more than seven PhD candidates. One supervisor said he was in charge of 47 candidates. Some 60 percent of PhD candidates revealed they have been assigned more than half of their professors' research projects.

"Chinese universities should step up efforts to reform the tutorial system and introduce more stricter requirements for people to get a PhD diploma in a bid to improve the quality of education," Ge Daoshun, a professor of social policy at the Chinese Academy of Social Sciences.told the reporter.

6. Schools Use Phantom Exam-Sitters to Look Good

(SCMP, 26-08-2010)

Zhong Hualei, a dropout from Shushan Central School in Wuwei County, Anhui, thought he would have nothing more to do with his former school. Then he learned he had scored more than 500 marks in the senior middle school qualification exam. There was just one problem: he had never sat the exam. […] Zhong - who was a pupil at Huanggu Junior Middle School, which is affiliated with Shushan Central - took his anger to the internet and demanded an official probe. An investigation by county education authorities confirmed Zhong's suspicion. […] Zhoupu Middle School in the Xinzhou district of Wuhan, capital of Hubei, was found to have organised 32 pupils to sit senior middle school qualification exams in June on behalf of other pupils, most of whom had dropped out. While investigators have yet to make public their findings, such scams have further damaged the country's educational system, which is increasingly susceptible to corruption and irregularities. And it is the students from underprivileged families who appear to suffer the most. Professor Xiong Bingqi, vice-president of the 21st Century Education Research Institute, said such scams opened up a new dimension of irregularities. But he said the schools had good reason to resort to such a scam: if the number of dropouts at the junior middle school level rose too high, the schools could be held accountable. Xiong said another possible reason schools engaged in such tricks was so that they could siphon off government subsidies for vocational school pupils. Those schools are entitled to 1,500 yuan (HK$1,716) a year for each pupil as part of the central government's job creation drive. […]

7. SSSTC 3rd Call for Proposal

(Swissnex, 29-08-2010)

“The Sino Swiss Science and Technology Cooperation (SSSTC) is a governmental framework program aiming to intensify scientific exchange between the two countries. Since 2008, the program has supported 25 joint research projects, 18 institutional partnership and 81 faculty /student exchanges.

SSSTC program is launching its 3rd call for proposal for Institutional Partnership (IP), with the deadline set on Sept 30, 2010. This instrument is designed to enlarge initial contact between the two research entities in Switzerland and in China. The Swiss grant will cover the living expanses of Chinese scholars coming to Switzerland, cost for small size workshops and joint training programs as well as the international flights of the outgoing Swiss scientists to their partner institutes in China. See details of the instruction for IP Grant application at http://www.global.ethz.ch/stc/china/china/instruments/ip”. For further information, please contact Lan.zuogillet@swissnexchina.org in China or maio.chen-su@sl.ethz.ch in Switzerland.

Events (September-October 2010)

September 2010

Exhibition "Climate Trail" and "Affected: The Human Faces of Climate Change"
Date: September 1st-14th
Place: Qingdao Olympic Sailing Museum
Contact: Embassy of Switzerland in China

The 1st Laser Interaction with Matter Int's Conference, LINIC
Date: September 10th
Place: Changchun
Contact: Changchun Institute of Optics, Fine Mechanics Physics, CAS

SSSTC Workshop on Renewable Energies and Material Sciences
Date: September 11th to 12th
Place: Beijing
Contact: CAS/ETHZ

International Conference on Enviornmental Catalysis
Date: September 12th
Place: Beijing
Contact: Research Center for Eco-Enviornmental Sciences, CAS

18th International Conference on Enviornmental Indicators
Date: September 13th
Place: Hefei
Contact: University of Science and Technology of China, CAS

Future Cities Conference, Shanghai World Expo
Date: September 13th to 17th
Place: Swiss Pavilion, Shanghai EXPO
Contact: Swissnex China

E+ Series: Nobel Lectures with Kurt Wüthrich, Nobel Price in Chemistry, 2001
Date: September 14th
Place: China Science and Technology Museum
Contact: Swissnex China

The 15th International Exhibition on Quality Control and Testing Equipment
Date: September 15th
Place: Shanghai
Contact: Shanghai Research Institute of Materials

International Conference on Sustainable Development of Subtropical Agriculture
Date: September 15th
Place: Changsha
Contact: Institute of Subtropical Agriculture, CAS

Shanghai Design Biennial
Date: September 16th
Place: Shanghai
Contact: Shanghai Foreign S&T Exchange Center

SMARTricity Asia Congress 2010
Date: September 15th to 17th
Place: Shanghai
Contact: Opplandcorp

Pharma Focus Congress
Date: September 16th to 17th
Place: Shanghai
Contact: China Decision Makers Consultany

E+Series: Meet the Astronauts, Claude Nicollier
Date: September 19th
Place: China Science and Technology Museum
Contact: Swissnex China

2010 International Conference on Education and Information Technology
Date: September 17th to 19th
Place: Chongqing
Contact: Chongqing University

MICCAI 2010, the 13th International Conference on Medical Image Computing and Computer Assisted Intervention
Date: September 20th to 24th
Place: Beijing
Contact: Institute of Automation, CAS

October 2010

3rd IEEE International Conference on Enviornmental and Computer Sciences
Date: October 3rd to 5th
Place: Kunming, Yunnan
Contact: www.icecs.org

The Second Asia NIR Symposium
Date: October 15th to 18th
Place: Shanghai
Contact: www.ans2010.com

2010 International Conference on Software and Computing Technology
Date: October 18th to 19th
Place: Kunming, China
Contact: www.icstc.org/cfp.htm

USTC-Cambridge Workshop on "Man and Nature in the East and West"
Date: October 21st
Place: Hefei
Contact: University of Science and Technology of China, CAS

International Conference on Machine Learning and Application, ICMLA
Date: October 24th,
Place: Hefei
Contact: University of Science and Technology of China, CAS

Power Transmission and Control Asia 2010
Date: October 25th
Place: Shanghai
Contact: China Hydraulics Pneumatics & Seals Association

CEMAT Asia 2010
Date: October 25
Place: Shanghai
Contact: China Logistics Alliance Network

The 6th International Symposium on Persistent Toxic Substances
Date: October 30
Place: Beijing
Contact: Research Center for Eco-Enviornmental Sciences, CAS

The 31st International Congress of Imaging Science
Date: October
Place: Beijing
Contact: CAST Chinese Society for Imaging Science and Technology

China International Public Security Products EXPO 2010
Date: October 30
Place: Beijing
Contact: China Security and Protection Industry Association