



CACCI

Health & Education Newsletter

Volume 5

January 2015

Message from the Chairman

Dear CACCI members and friends,

As Chairman of the Asian Council on Health and Education (ACHE), I am pleased to present the fifth issue of the Newsletter of ACHE to all our colleagues in the health and education sectors.

This issue not only highlights the trends in the Asia-Pacific region, but also includes the latest news from the region and interesting reports on health and education. I hope that you will find the articles included in this Newsletter of great value, and look forward to your contribution to the future issues of the Newsletter.

Since assuming the Chairmanship in 2012, I have found this Council a valuable platform for information exchange and networking for all representatives from the region's health and education sectors. Therefore, all CACCI members are encouraged to take advantage of the Council and the Newsletter as channels to voice their opinions and viewpoints.

My Best Wishes

Dr. Seyed Hassan Tabatabaei Nejad
Chairman
Asian Council on Health and Education



Inside this issue

- ❖ Apple, Google, Samsung vie to bring health apps to wearables
- ❖ High-sugar diet tax to be developed to combat obesity
- ❖ Taiwanese stool chart helps diagnosis of liver defect in infants
- ❖ Health T-shirts and a mind-reading bar unveiled in Japan
- ❖ Health Products, Medications Presented in Iran Nano 2014 Festival
- ❖ Pharmacy Open Day, Roadshow held in Brunei
- ❖ New Creative Productivity Index to Help Foster Innovation in Asia
- ❖ Japan companies keen on investing in RP's education, F&B industry - JETRO official
- ❖ World Bank and Ministry of Education support early childhood education in Mongolia
- ❖ Vietnam, Russia boost education cooperation
- ❖ Singapore math is travelling the world
- ❖ New Universities in Asia Outranking Young Colleges in the West
- ❖ Brunei joins ASEAN bid to improve regional education
- ❖ Kazakhstan introduces dual education

Apple, Google, Samsung vie to bring health apps to wearables

By Christina Farr

For decades, medical technology firms have searched for ways to let diabetics check blood sugar easily, with scant success. Now, the world's largest mobile technology firms are getting in on the act.

Apple Inc., Samsung Electronics Co. and Google Inc., searching for applications that could turn nascent wearable technology like smartwatches and bracelets from curiosities into must-have items, have all set their sites on monitoring blood sugar, several people familiar with the plans say.

These firms are variously hiring medical scientists and engineers, asking U.S. regulators about oversight and developing glucose-measuring features in future wearable devices, the sources said.

The first round of technology may be limited, but eventually the companies could compete in a global blood-sugar tracking market worth over \$12 billion by 2017, according to research firm GlobalData.

Diabetes afflicts 29 million Americans and costs the economy some \$245 billion in 2012, a 41 percent rise in five years. Many diabetics prick their fingers as much as 10 times daily in order to check levels of a type of sugar called glucose.

Non-invasive technology could take many forms. Electricity or

ultrasound could pull glucose through the skin for measurement, for instance, or a light could be shined through the skin so that a spectroscope could measure for indications of glucose.

"All the biggies want glucose on their phone," said John Smith, former chief scientific officer of Johnson & Johnson's LifeScan, which makes blood glucose monitoring supplies. "Get it right, and there's an enormous payoff."

Apple, Google and Samsung declined to comment, but Courtney Lias, director at the U.S. Food and Drug Administration's chemistry and toxicology devices division, told Reuters a marriage between mobile devices and glucose-sensing is "made in heaven."

In a December meeting with Apple executives, the FDA described how it may regulate a glucometer that measures blood sugar, according to an FDA summary of the discussion.

Such a device could avoid regulation if used for nutrition, but if marketed to diabetics, it likely would be regulated as a medical device, according to the summary, first reported by the Apple Toolbox blog.

The tech companies are likely to start off focusing on non-medical applications, such as fitness and education.

Even an educational device would need a breakthrough from current technology, though, and some in the medical industry say the tech firms, new to the medical world, don't understand the core challenges.

"There is a cemetery full of efforts" to measure glucose in a non-invasive way, said DexCom chief executive Terrance Gregg, whose firm is known for minimally invasive techniques. To succeed would

require "several hundred million dollars or even a billion dollars," he said.

POACHING

Silicon Valley is already opening its vast wallet.

Medtronic Inc. Senior Vice President of Medicine and Technology Stephen Oesterle recently said he now considers Google to be the medical device firm's next great rival, thanks to its funding for research and development, or R&D.

"We spend \$1.5 billion a year on R&D at Medtronic – and it's mostly D," he told the audience at a recent conference. "Google is spending \$8 billion a year on R&D and, as far as I can tell, it's mostly R."

Google has been public about some of its plans: it has developed a "smart" contact lens that measures glucose. In a blog post detailing plans for its smart contact lens, Google described an LED system that could warn of high or low blood sugar by flashing tiny lights. It has recently said it is looking for partners to bring the lens to market.

The device, which uses tiny chips and sensors that resemble bits of glitter to measure glucose levels in tears, is expected to be years away from commercial development, and skeptics wonder if it will ever be ready.

Previous attempts at accurate non-invasive measurement have been foiled by body movement, and fluctuations in hydration and temperature. Tears also have lower concentrations of glucose, which are harder to track.

But the Life Sciences team in charge of the lens and other related research is housed at the Google X facility, where it works on major breakthroughs such as the self-driving car, a former employee who requested anonymity said.

Apple's efforts center on its

Continued on page 3



A model presents a Samsung Galaxy Gear smartwatch after its launch at the IFA consumer electronics fair in Berlin, September 4, 2013.

Apple, Google

... Continued from page 2

iWatch, which is on track to ship in October, three sources at leading supply chain firms told Reuters. It is not clear whether the initial release will incorporate glucose-tracking sensors.

Still, Apple has poached executives and bio-sensor engineers from such medical technology firms as Masimo Corp, Vital Connect, and the now-defunct glucose monitoring startup C8 Medisensors.

“It has scooped up many of the most talented people with glucose-sensing expertise,” said George Palikaras, CEO of Mediwise, a startup that hopes to measure blood sugar levels beneath the skin’s surface by transmitting radio waves through a section of the human body.

The tech companies are also drawing mainstream interest to the field, he said. “When Google announced its smart contact lens, that was one of the best days of my career. We started getting a ton of emails,” Palikaras said.

Samsung was among the first tech companies to produce a smartwatch, which failed to catch on widely. It since has introduced a platform for mobile health, called Simband, which could be used on smart wrist bands and other mobile devices.

Samsung is looking for partners and will allow developers to try out different sensors and software. One Samsung employee, who declined to be named, said the company expects to foster noninvasive glucose monitoring.

Sources said Samsung is working with startups to implement a “traffic light” system in future Galaxy Gear smartwatches that flashes blood-sugar warnings.

Samsung Ventures has made a number of investments in the field, including in Glooko, a startup that helps physicians access their patients’ glucose readings, and in an Israeli glucose monitoring startup through its \$50 million Digital Health Fund.

Ted Driscoll, a health investor with

High-sugar diet tax to be developed to combat obesity

By Chi-hao James Lo

In hopes of combating the increase in national obesity, the medical community and the government in Taiwan are seeking to develop a taxation policy that will impose higher taxes on products with high sugar content.

Reportedly, medical academics and the government have co-established the Academic Society of Obesity Prevention, and will develop the High-Sugar Diet Donation, a policy that seeks to impose a 0.2 to 0.5 percent earmarked tax on food and beverage products with sugar content exceeding that of the national regulated standard. The tax has been called a donation as the received tax will be used to develop obesity prevention programs for the



Health Promotion Administration of the Ministry of Health and Welfare.

The society stated that the first phase of the taxation program will target processed foods, fast foods, preserved condiments, breads, cakes and sugared beverages. The first phase is expected to raise NT\$1 billion in the first year of its implementation, and could potentially decrease the national obesity rate by 0.5 percent, as well as decrease the annual expense to National Health Insurance by NT\$10 billion.

Aside from implementing the tax, the society has stated that they will also request that fast food and processed food companies include sugar content warnings. The warnings would be divided into red, blue and green color grades, so as to provide nutrition reference to consumers. The society also appealed to the Ministry of Education (MOE), hoping that the MOE will include proper nutrition guidelines to elementary students, so as to establish proper diet knowledge at an early age.

Source: China Post, July 10, 2014 ■

Claremont Creek Ventures, told Reuters he’s heard pitches from potentially promising glucose monitoring startups, over a dozen in recent memory.

Software developers say they hope to incorporate blood glucose data into health apps, which is of particular interest to athletes and health-conscious users.

“We’re paying close attention to research around how sugar impacts weight loss,” said Mike Lee, cofounder of MyFitnessPal.

After decades of false starts, many medical scientists are confident about a breakthrough on glucose monitoring. Processing power allows quick testing of complex ideas, and the miniaturization of sensors, the

low cost of electronics, and the rapid proliferation of mobile devices have given rise to new opportunities.

One optimist is Jay Subhash, a recently-departed senior product manager for Samsung Electronics. “I wouldn’t be at all surprised to see it one of these days,” he said.

Source: Reuters, Jun 23, 2014 ■



Taiwanese stool chart helps diagnosis of liver defect in infants

By Chen Ching-fang and Elizabeth Hsu

A simple health check with the help of a stool color chart could save infants suffering from congenital biliary atresia from deadly liver damage, health officials said on October 14, 2014, noting that the Taiwan-developed health examination chart has been adopted by many countries.

Since 2004, the Taiwanese health authorities have included the “Stool Check Chart” in the “Children’s Health Manual” to facilitate parents or nurses to examine, based on stool color, whether their babies are affected with congenital biliary atresia, a disease of the bile ducts that affects only infants.

Bile is a digestive liquid that is made in the liver. It travels through the bile ducts to the small intestine, where it helps digest fats. In biliary atresia, the bile ducts become inflamed and blocked soon after birth. This causes bile to remain in the liver, where it starts to destroy liver cells rapidly and cause cirrhosis, or scarring of the liver.

In 2006, Taiwan established the world’s first reporting system for the nationwide screening of biliary atresia, encouraging health care personnel at hospitals and clinics to perform the examination on 30-day-old infants by asking their parents or caregivers about the color of their babies’ stools.

Thanks to this measure, 300 infants over the past decade have been discovered through the stool color check to have bile duct abnormalities and liver dysfunction, officials from

the Health Promotion Administration (HPA) under the Ministry of Health and Welfare said at a press conference.

Those children were given treatment in time to allow bile drainage, the officials said, noting that without such treatment, infant biliary atresia can easily develop to liver cirrhosis, killing the patients within two years.

According to the HPA, around 200,000 babies are born in Taiwan every year, 30 to 40 of whom have biliary atresia.

Chang Mei-hwei, a professor in pediatrics at National Taiwan University Hospital, who developed the “Stool Check Chart” for infants along with the HPA in 2002, pointed out that between 1976 and 2000 before the circulation of the chart, the percentage of infants with biliary atresia who received the Kasai procedure within the first 60 days of birth was 35.6 percent.

The percentage increased to 65.8 percent in the period between 2004 and 2013, Chang said.

Moreover, after tracking biliary atresia cases, the five-year survival rate of patients who have not received a liver transplant climbed from 37.5 percent in 1999-2000, before the circulation of the nine-color stool chart, to 64.3 percent in 2002-2005. The total five-year survival rate has surged from 55.7 percent to 89.3 percent, according to Chang.

The results were published in the *Journal of Hepatology* in 2008, since which time countries including the United States, the United Kingdom, Canada, New Zealand, Switzerland, the Netherlands, Oman, Thailand, the Philippines, Malaysia, Israel and Mexico have asked for the right to use the chart or conduct research on it, the FDA said.

Source: Central News Agency, October 14, 2014 ■

Health T-shirts and a mind-reading bar unveiled in Japan

The gadgets were all part of this year’s Cutting-Edge IT & Electronics Comprehensive Exhibition (CEATEC), Asia’s largest electronics fair, just outside Tokyo.

Leading the pack was a tiny projection device that can be attached to a pair of glasses to give the wearer an ever-visible screen.

The prototype -- dubbed Toshiba Glass and weighing 42 grammes (less than 1.5 oz) -- might offer directions or a simultaneous translation, or could assist factory workers who need both hands free while working, a Toshiba researcher said.

“We still don’t know what wearable formats will be the most accepted in the future,” said Toshiba senior research scientist Yoshiyuki Kokojima.

“Constantly seeing a small screen may get tiring to the eyes, but you could get information without even lifting a finger. It’s less effort than consulting a wrist watch.”

Leading mobile carrier NTT Docomo was showcasing a T-shirt that uses a special textile to keep track of the wearer’s pulse.

The data is transmitted to a smartphone, which must run a specific app, the company said.

While Docomo’s offering might have concentrated on health, Fujitsu unveiled something to encourage a bit more relaxation, in the form of a device that could help a barman read his customers’ minds.

Small sensors in a bar track where a drinker is looking and automatically offer information on screens about that bottle of expensive wine he keeps gazing at -- such as where it comes from and what year it is.

“This could be one way of marketing in the future,” said Fujitsu spokesman Naoki Mishiro.

NTT Docomo’s Yubi Navi might

Continued on page 5



Health T-shirts

... Continued from page 4

prove useful for customers struggling to find their way home after a night at such an accommodating bar.

Billed as “just like holding someone’s hand”, the small rubber cuboid fits snugly in the palm and buzzes or vibrates to guide the user through unfamiliar streets.

The kit offers freedom from the tyranny of having to keep your eyes glued to a smartphone for directions, the company said.

After a user types in the intended address on their connected phone, the device takes over, nudging left or right until the destination hoves into view.

Its inventors say the Yubi Navi also offers a way to communicate with someone who is far away, effectively “squeezing” their hand by activating your own device.

“Touch sensation can create a new type of gadget for the future,” an NTT Docomo presenter said.

Nearly 550 companies are taking part in the trade show, which has gathered foreign exhibitors from 24 countries and territories.

Source: Agence France-
Presse (AFP), Oct 7, 2014 ■



Glasses that tell you how to get home, adverts that know where you are looking and a T-shirt that knows how fast your heart is beating were on display at a huge tech gathering in Japan on October 7, 2014.

Health Products, Medications Presented in Iran Nano 2014 Festival

Eight companies active in the field of health products and medications presented their latest commercial products in the Seventh Nanotechnology Festival in Iran.

Various types of washing solutions with natural sources produced by Kimia Shimi Sahand Company are among the products presented in this section. This product is completely herbal and natural. The washing solutions are produced in the company at two phases of LCD and LED nano emulsion washing solutions and home alcohol-free glass cleaners.



The product has successfully acquired Nano Scale Certificate. Among the advantages of the product, mention can be made of its natural mature and harmlessness.

Various types of disinfection products for medical environments and devices produced by Kitotech Company are among other products presented in Health and Hygiene Section of Iran Nano 2014.

The product has been designed and produced based on nanotechnology to prevent the transmission and extension of infectious diseases. All disinfection

products have obtained the required certificates from the Ministry of Health and Medical Education.

Exir Nano Sina Company is another company active in the production of nanoproducts in the field of health and hygiene.



This company has put on display drugs, including SinaDoxosome and SinaCurcumin, which have been commercially produced and presented to the market, as well as some other products at R&D level.

Due to having curcumin, SinaCurcumin is considered an anti-oxidant compound and it has potential effects such as preventing the proliferation of cancer cells, breaking the resistance of aggressive or cancer cells, breaking the resistance of cancer cells against chemotherapy drugs, wound treatment and treating microbial and cardiovascular diseases.

Source: Fars News Agency, October 8, 2014 ■

Pharmacy Open Day, Roadshow held in Brunei

Brunei's Minister of Health YB Pehin Dato Hj Adanan urged the public not to be influenced by advertisements on medicinal products through the social media as they do not meet the approved standards and specifications, the state broadcaster Radio and Television Brunei (RTB) reported on October 12, 2014.

The minister made the remarks at the launching ceremony of Pharmacy Open Day and Roadshow, adding that medicinal products sold without permit can bring hazards and negative effects to consumers' health and well-being.

In 2013 until March this year, the government had spent 59.8 million dollars on supplies of medicines and vaccines needed for treatment of patients among the community, he said.

But some patients do not take the medicines provided as prescribed by doctors, causing their illnesses to get worse and chronic, and making them hard to treat or control. This will not only be a hazard and a burden to the patients themselves but also to their families and nation.

At the ceremony, the Book on

Brunei Darussalam National Medicinal Policy was launched. The book serves as the framework for more systematic coordination in pharmaceutical activities in the country and as a source of reference that is more proactive, innovative and dynamic as well as responsive towards changes and developments of the global and technological scenario. It contains the medicinal policy what will further strengthen the role of the Ministry of Health through the Pharmaceutical Service Department in protecting public safety with the use of quality and effective medicines towards achieving optimum health and well-being of the community.

The four-day event is organized by the Pharmaceutical

Service Department, aiming to disseminate information on its services, and knowledge in medicines, health and cosmetic products, as well as to promote pharmacy-related professions. Themed, "Know Your Medicines - Ask the Pharmacists", the Pharmacy Open Day is held in conjunction with World Pharmacy Day, observed every 25th of September.

Source: Xinhua News Agency, October 12, 2014



New Creative Productivity Index to Help Foster Innovation in Asia

A new Creative Productivity Index developed by the Asian Development Bank (ADB) and Economist Intelligence Unit (EIU) ranks Japan and the Republic of Korea as countries most efficient in the Asia and Pacific region at turning creative inputs into tangible innovation. Myanmar, Pakistan, and Cambodia, by contrast, are ranked as the least efficient innovators.

"As countries seek to innovate to avoid middle-income traps, all governments—especially those with limited resources—need to be sure that their investments boost both efficiency and productivity, benefiting

their economies and people, and move to a knowledge-based economy," said Bindu N. Lohani, Vice-President for Knowledge Management and Sustainable Development at ADB.

Creative productivity is an important attribute for knowledge-based economic development and the new index gives policymakers a unique tool to assess how to best foster innovation and creativity. While measures will differ by country, policies that make it easier to set up businesses and create flexible labor markets would benefit everyone, as would greater investment in education,

skills, information and communications technologies, and internet access.

The Creative Productivity Index differs from existing innovation-related indices by focusing on how efficiently countries turn their creative inputs into innovation outputs rather than just the absolute level of creative inputs. This allows countries to seek the most effective—and affordable—innovation investments. It also captures elements of creativity that are more relevant in less developed countries, such as agricultural innovation.

The index uses 36 input indicators

Continued on page 7

New Creative

... Continued from page 6

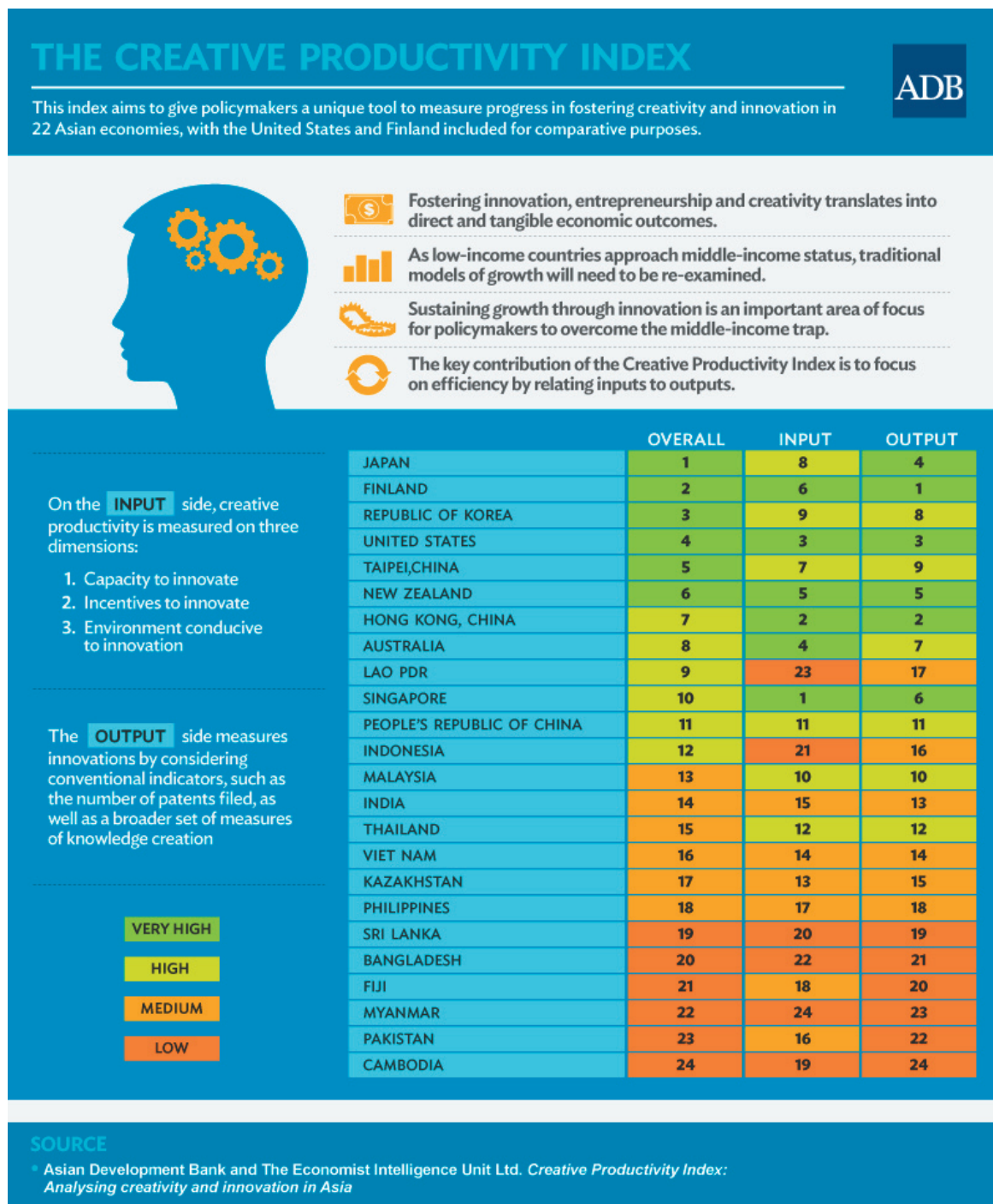
to measure the capacity and incentives for innovation, including how many global top 500 universities a country has, the urbanization rate, spending on research and development, protection of intellectual property rights, and

corruption and bureaucracy. The eight output indicators to measure innovation include the number of patents filed, export sophistication, value added to agriculture, and the number of books and films produced.

On innovation inputs alone, Singapore topped the rankings with strong political institutions, protection

of intellectual property, and contract enforcement. Among Asian countries, Hong Kong, China topped the list in terms of innovation outputs due to a high level of export sophistication and its prolific film production industry.

Source: Asian Development Bank, September 12, 2014



This index aims to give policymakers a unique tool to measure progress in fostering creativity and innovation in 22 Asian economies, with the United States and Finland included for comparative purposes.

Japan companies keen on investing in RP's education, F&B industry – JETRO official

By Danssa O. Rivera



President Benigno Aquino III meets with officials of Japan External Trade Organizations (JETRO) headed by its chairman and CEO Hiroyuki Ishige during a courtesy call in Malacañang on Thursday, October 23. JETRO is a government-related organization that works to promote mutual trade and investment between Japan and the rest of the world.

Japanese companies focusing on education and the food and beverage industry are keen on investing in the Philippines, given the large population and English-speaking capabilities of, an official of the Japan External Trade Organization (JETRO) said on October 24, 2014.

More Japanese companies are craning towards the Philippines as an expanding Southeast Asian economy, JETRO director-in-charge of service industry Hironobu Kitagawa told reporters in Makati City on the sidelines of the 2nd International Symposium on Service Industry.

“Japanese companies didn’t know the Philippine market, because they [couldn’t] see. Now, the Philippine market has momentum, soon we have to choose Philippine market,” he noted.

Last year, the Philippines posted a 7.2 percent growth in gross domestic

product (GDP) from 6.8 percent in 2012, making the country Asia’s second fastest growing economy next to China.

In the second quarter of 2014, the Philippine economy expanded by 6.4 percent, matching that of Malaysia as the second fastest in Asia next to China, from 5.6 percent in the first quarter and 7.9 percent a year earlier.

The interest of food and beverage companies are being kindled by the Philippine population, Kitagawa said.

“They aim to have a new market. They see the Philippine market has potential for Japanese companies,” he said.

Another competitive edge of the Philippines in the eyes of Japanese companies is the country’s characteristic as an English-speaking nation, which bodes well for education-related investments, the JETRO official noted.

There seems to be not much of a language barrier, unlike in Thailand, Vietnam... “It’s easy to access for Japanese companies,” Kitagawa said.

“Also, the Japanese English education market is shrinking. Philippines has core competence in English,” he added.

To attract more Japanese investments, the Philippines should market itself more to Japan, Kitagawa said.

“Japanese companies do not know the real market in purity... because they can’t see what kind of lifestyle is in the Philippines or what kind of business is being done in Philippines,” he said.

Out of the over 150 participants, JETRO brought 30 to 40 Japanese companies to the symposium.

“They would like to investigate new partnerships, new investment frontier in the Philippines,” he said.

“We’ll see more Japanese companies here in the near future as the Philippine market is becoming larger and larger,” he added.

Source: GMA News, October 24, 2014 ■



JETRO
Japan External Trade Organization



World Bank and Ministry of Education support early childhood education in Mongolia

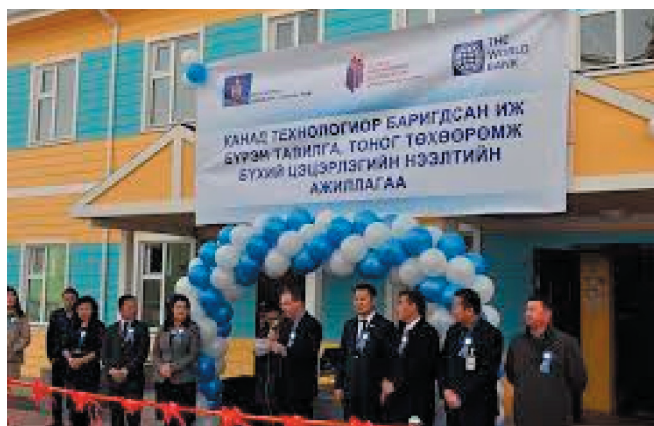
For over 20 years the World Bank has supported the Mongolian government's education reforms and has implemented a total of 46.8 mln dollars grant to the education sector.

The World Bank and the Ministry of Education and Science began the implementation of the Early Childhood Education Project with the grant from the Global Partnership for Education of 10 million dollars in 2012.

The aim of the Global Partnership for Education – Early Childhood Education (GPE-ECE) Project is to provide access to early childhood education for children in disadvantaged communities and reduce the social inequality in Mongolia. This aim of involving herders' children in early childhood education is being achieved by increasing access to preschool education, creating alternative preschool classes, improving teaching and learning environment, and providing learning materials, furniture, equipment and toys.

"We are delighted to be assisting Mongolia in educating its younger generation" said James Anderson, the Country Manager of the World Bank to Mongolia. "The Early Childhood Education Project strives to ensure that all children have access to education, that all can share opportunities for prosperity, a key goal of the World Bank Group."

One hundred ger-kindergartens were supplied and distributed to rural areas of 100 soums of 14 aimags with large populations of herders' children and where the pre-school enrollment rate is especially low. Each year 2,500 children have benefited and ger kindergartens are providing a convenient way for children of herder families to get early childhood education.



"The mobile ger kindergartens have become an important tool to increase the preschool enrollment in rural areas. The newly built kindergartens in Ulaanbaatar city and the ger-kindergartens will help children develop the skills to succeed throughout their education and throughout their lives." said the team leader of the project Prateek Tandon.

Under this project, 17 new kindergartens with the capacity of 100 children each are being built in 8 districts of Ulaanbaatar. Furniture, kitchen and other equipment, indoor and outdoor playground toys, carpets

and bedding are also supplied to the newly built kindergartens.

Presently, the State Professional Commission has approved the completed buildings of 10 kindergartens that began their operations; the remaining 7 will be completed by end of October this year.

These kindergartens will provide a child-friendly environment and offer high quality learning conditions for over 1,700 children in Ulaanbaatar including remote districts such as Bagakhangai, Baganuur and Nalaikh.

Initial survey results have shown the satisfaction of local communities. Teachers, rural soum governors, parents of the students and remote herders have expressed strong support for the project's interventions and the improvement of the delivery of these services.

Source: World Bank, October 13, 2014 ■

Vietnam, Russia boost education cooperation

A delegation of Vietnam's Ministry of Education and Training, led by its Minister Pham Vu Luan, had a working visit to Russia on October 3-4, 2014.

At the meeting with Russian Education and Science Minister, Livanov Dmitry Victorovich, the two sides reviewed progress achieved and agreed on further boosting Russia's cooperation in helping to train students in Vietnam with the growing numbers, focusing and strengthening personnel training for nuclear energy, accelerating the establishment of the University of Vietnam - Russia and further

development of the Russian language and promoting Russian culture in Vietnam.

Russia also pledged to award 1000 scholarships for Vietnamese students in 2018.

At another meeting, Larisa Efremova, Deputy Director of the Department for International Cooperation of the Russian Ministry of Education and Science confirmed the tremendous support for activities related to cooperative relations with Vietnam. She added the ministry will hold additional meetings with rectors

Continued on page 10

Singapore math is travelling the world

By Amelia Teng

Singapore mathematics is going places, and there are no signs of it slowing down.

From India to France and Chile, more countries have, in recent years, turned to the famed Singapore approach to teaching the subject, using visual means such as objects, pictures and diagrams to teach concepts.

Education officials and publishers abroad are paying closer attention to the way maths is taught here after Singapore students emerged tops in maths and problem-solving in international tests.

A total of 10 countries - including South Africa, Brunei and the Netherlands - are using customised textbooks based on Singapore maths

produced by publisher Marshall Cavendish Education.

This is up from just two countries - Thailand and Libya - five years ago.

These books are based on a series of maths textbooks, called My Pals Are Here! The principal author of the books is Dr Fong Ho Kheong, 66.

Marshall Cavendish Education's maths materials are being used in 42 countries, where 40 to 100 per cent of schools use its textbooks.

The publishing giant has also partnered Oxford University Press to publish a new series based on Singapore maths for Britain next year.

Another publisher, Scholastic Australia, has also adopted Singapore maths in its new series called Prime

Mathematics, used in Australia. The textbooks also incorporate good practices from South Korea and Hong Kong.

Scholastic Australia's head of education, Mrs Christine Vale, said a trial with the books started with three Australian schools in July, and has grown to 50 schools.

In India, 85 primary schools in areas such as Mumbai, New Delhi and Hyderabad have been using another version of the books - known as Alpha Mathematics - since April.

Dr Duriya Aziz, senior vice-president of Scholastic's international education unit, said there is more awareness of the importance of maths. "The focus for a long time was on literacy, but more countries recognise that to solve problems, you need good grounding in numeracy," she said.

Mrs Vale, a former primary school maths teacher, said: "There is interest in how maths is taught in Singapore because it is obviously very successful."

In the latest Programme for International Student Assessment, held in 2012, Singapore students came in second in maths, behind their peers in Shanghai.

Australia was ranked 19th

Mr Jeffery Thomas and his Singaporean wife, Ms Dawn Yuen, who own a business selling Singapore textbooks in the United States, said sales have "increased significantly" in the past five years. Their company, Singapore Math Inc, distributes textbooks to several thousand schools in the US and Canada.

Mrs Vale said that while most topics such as fractions are similar, the methods developed by the Ministry of Education here allow children to build on their understanding gradually. "It goes more in-depth about each topic, whereas our schools tend to move

.... Continued on page 11

Vietnam, Russia

... Continued from page 9

of Vietnamese universities and high schools to lift the two countries' cooperation to a new level.

Within the framework of the working visit, the Vietnamese delegation also visited Moscow State Automobile & Road Technical University (MADI)-one of the oldest universities in Russia.

At the event, Vietnamese Minister of Education and Training Pham Vu

Luan received the title of Honorary Doctor of MADI for his significant contribution to boosting educational cooperation among universities of the two countries.

On this occasion, the Vietnamese guests also attended an international exhibition on education and training in Moscow and met with their Russian colleagues.

Source: VIETNAMNET Bridge, October 6, 2014



Vietnam, Russia

... Continued from page 9

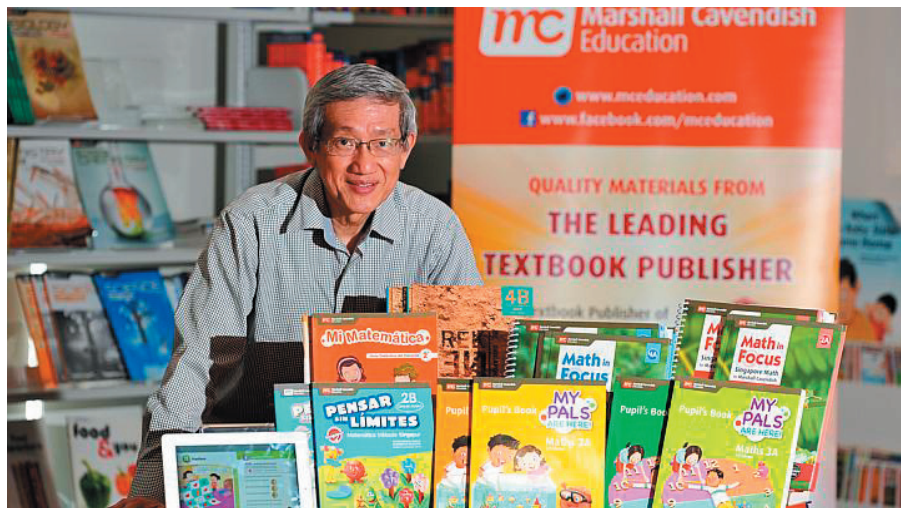
quickly from one topic to another.”

Ms Nita Arora, principal of Sri Venkateshwar International School in New Delhi, said teachers were sceptical at first about using the series, but are finding its methods helpful for children to understand concepts.

For instance, they learn fractions through means such as figures, paper-strip folding and a food-dividing activity section.

This has allowed the teachers to “think in many ways” and children to “relate to numeracy to everyday life”, she said.

Source: *Straits Times*, October 23, 2014 ■



Dr Fong Ho Kheong is the principal author of a series of maths textbooks called *My Pals Are Here!*, on which Marshall Cavendish Education’s customised textbooks for 10 countries are based.

New Universities in Asia Outranking Young Colleges in the West

By Calvin Yang

Young Asian universities are outdoing their young western counterparts in research and teaching, but established education powerhouses in the United States and Europe continue to dominate academia at the highest levels, according to the educational consulting firm Quacquarelli Symonds.

In the firm’s annual listing of the World’s Top 50 Universities under 50, published last week, the five top spots were taken by Asian universities. The list aims to rank the best universities established in the past half-century.

Nanyang Technological University in Singapore, second in the past two editions, overtook Hong Kong University of Science and Technology

to secure the top spot. The Korea Advanced Institute of Science and Technology and Pohang University of Science and Technology, another Korean institution, were third and fourth, with City University of Hong Kong placed fifth.

The president of N.T.U., Bertil Andersson, says that Asian universities are slowly catching up on the more established institutions in the global charts. “This shows that Asia is set to become the future global powerhouse of higher education and research,” he said.

Still, in Quacquarelli Symonds’ s overall World University Rankings released two weeks earlier, N.T.U. came in just 39th.

Of the top 10 in the overall World University Rankings, which aim to compare the best of the best, six were from the United States, including the Massachusetts Institute of Technology, which



retained its top spot from last year. The other four were from Britain, including the University of Cambridge and Imperial College, London, which tied for second.

No Asian universities made it into the top 20; National University of Singapore placed highest, at 22nd.

Quacquarelli Symonds, based in London, bases its assessments on several criteria. Research clout, employer reputation and academic reputation heavily weighted, which often benefit older and more established institutions.

Both lists reflect a focus on science, technology, engineering and math, exemplified by the top schools in each.

Another list, the World University Rankings published by Times Higher Education, will be released this week.

Source: *The New York Times*, September 28, 2014 ■



Brunei joins ASEAN bid to improve regional education

By: Ak Md Khairuddin Pg Harun

The Second Phase of the Southeast Asia Primary Learning Metric (SEA-PLM) was launched on October 20, 2014 in a bid to evaluate and improve the region's education system using a "more culturally appropriate and relevant" assessment tools.

The launching ceremony was through the collaboration of the Southeast Asian Ministers of Education Organisation (SEAMEO) and United Nations Children's Fund Regional Office East Asia and the Pacific (UNICEF EAPRO).

Brunei's Minister of Education, Yang Berhormat Pehin Orang Kaya Seri Kerna Dato Seri Setia (Dr) Hj Awg Abu Bakar Hj Apong, education ministers and high officials from four other Southeast Asian countries were also present during the ceremony.

Dr Witaya Jeradechakul, Director of SEAMEO Secretariat, in a welcoming speech said that SEA-PLM is a regional approach for system level monitoring of learner achievements which covers numeracy, literacy and 21st century /global citizenship skills.

Dr Witaya added the initiative was in response to the increasing need for assessments that would not only embrace national conditions but also empower countries in the region to learn from each other.

This will strengthen the technical collaboration on learning assessments and standards across education systems among members of the Association of Southeast Asian Nations (ASEAN).

According to the SEAMEO statement, the initiative is the first of its kind to be based on shared ASEAN values and national curriculum frameworks.

Brunei's Permanent Secretary of Core Education Dr Hj Junaidi Hj Abd Rahman presented a brief remark noting that SEA-PLM marked another milestone for Southeast Asia's commitment in assessing student's



achievement at primary school level.

"In comparison to other international assessment tools, the SEA-PLM will be more culturally appropriate and relevant in order to better and measure the status of our children's learning. In so doing, we can simultaneously improve our systems of education," said Dr Junaidi.

He also said that participating countries should set target for the

achievement of the region.

"I do hope that eventually we will bench mark our achievement with our region. I note this interest as various partners and organisation have shown their interest in supporting this initiative. This clearly indicates that the SEA-PLM is a very worthwhile initiative that we all should embrace," said the permanent secretary.

The Phase II of the project implementation will end next year. Aside from Brunei, other ASEAN countries to implement Phase II of the SEA-PLM are Thailand, Lao PDR, Malaysia and

Philippines.

The SEAMEO in a statement said that SEA-PLM addresses issues of regional common concern to ensure quality of education and aims to ensure all children achieve learning outcomes in the early years of primary schooling.

Source: The Brunei Times/Asia News Network, October 21, 2014

Kazakhstan introduces dual education

The new system combines apprenticeships with classroom learning.

By: Alexander Bogatik

Kazakhstan is implementing a dual education system in 176 specialised secondary trade schools, 20% of the total nationwide.

Dual education provides practical work training as well as theoretical courses. The new system allows the students to spend half of their instructional time at a workplace learning job skills. They'll graduate with a degree and with the practical knowledge they gained apprenticing.

The goal is that by 2016, the proportion of vocational colleges with the dual education system will reach 50%, according to the Ministry of Education and Science.

Learning from international experience

Kazakhstan started to discuss dual education in November 2012, after President Nursultan Nazarbayev visited Germany, a leader in work apprenticeships.

Some enterprises – such as Kazakhmys (a copper-mining firm), the Samruk-Kazyna Foundation (the country's sovereign wealth fund) and the Pavlodar Petrochemical Plant – already have facilities for dual education.

"Kazakhstani education is aimed at incorporating cutting-edge

Continued on page 13

Elites open

... Continued from page 12

international experience,” Sulushash Kurmanbekova, head of the Department of Education of Zhambyl Oblast, told Central Asia Online. “We learn ... from other countries like Canada, Germany, Japan and Singapore. For example, our local polytechnic college uses the Singaporean model, while College No. 6 [in Taraz] applies the German and Belarusian experience in dual education.”

“There are 44,000 trade school students involved in the dual education system so far,” Minister of Education and Science Aslan Sarinzhypov said. “They’re learning 83 specialisations. The core of dual education is a combination of theoretical instruction ... and training at an enterprise. Students spend half of their time apprenticing in the companies where they will [likely] be working.”

Skilled workers needed

The new system has appeared mostly at vocational schools, in a move to address Kazakhstan’s shortage of skilled workers.

The country’s new businesses in 2015 will need 106,000 skilled workers, primarily blue-collar ones, according to the Labour and Social Protection Ministry.

“Dual education isn’t something that can wait till tomorrow,” Dariya Kojamjarova, rector of Taraz State Pedagogical Institute, said. “We will have high-quality human resources by developing this system and by making apprenticeships mandatory.”

“Construction workers, welders and electricians are in demand,” Timur Galimov, 35, of Sarykemer village, Zhambyl Oblast, said. “Specialists with higher education, say, lawyers like



Trade school students on an internship make pasta at the ROLA-7 Co. in Sarykemer village, Zhambyl Oblast, September 25. [Alexander Bogatik]

me, can’t find work. Therefore, dual education has good prospects. In my day there was nothing like this; that’s why I don’t have a job.”

A clear win-win

Dual education is proving to be an unambiguous win-win for young Kazakhstanis and for employers. Graduates have an easier time finding work, already having acquired working skills, while the employers have a pool of hires who don’t need on-the-job training.

Yuri Pak, 23, is among the first who benefited from the new system.

“I graduated from Shymkent Transport College as an auto mechanic,” he said. “I went to my relatives in Taraz and found the job at a car repair shop pretty fast. That was because of my dual education. I regularly honed my theoretical knowledge by apprenticing, and by

the time of my graduation, I felt like a capable pro.”

Young skilled workers quickly grasp the details of making furniture, Bolat Isabayev, a small businessman from Zhambyl Oblast, said.

“Out of five apprentices at our company, two wanted jobs here after graduating,” he said. “They are great guys, and I am convinced this form of education is very efficient.”

Source: Central Asia Online, October 23, 2014



*Published by the Secretariat, Confederation of Asia-Pacific Chambers of Commerce and Industry
Victor C. Y. Tseng - Director General*

*Amador R. Honrado, Jr. – Editor; Wendy Yang / Jacqueline Uy – Contributing Editors; Julia Hsu – Assistant Editor
14/F, No. 11, Songgao Road, Taipei 11073, Taiwan*

Tel: (886 2) 2725-5663/4; Fax: (886 2) 2725-5665; Email: cacci@cacci.org.tw

Website: www.cacci.org.tw