



Ministry of Education  
SINGAPORE



# PRESS RELEASE

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## **TWO NEW FUTURESCHOOLS TO PUSH THE FRONTIERS OF ICT IN EDUCATION**

1. Students from Nan Chiau Primary School and Ngee Ann Secondary School can look forward to even more engaging and innovative learning experiences as their schools join the FutureSchools@Singapore programme. This was announced by Mr S Iswaran, Senior Minister of State, Ministry of Trade and Industry and Ministry of Education, at the MOE ExCEL Fest on 1 April, held at Suntec Convention Centre.

2. Working closely with the Ministry of Education (MOE), the Infocomm Development Authority (IDA) and institutes of higher learning, and supported by the National Research Foundation (NRF), the FutureSchools are developing new information and communications technology (ICT) solutions to support innovative teaching approaches. By exploring and pushing the frontiers of ICT in education, they have shown how the experience of teaching and learning can be enriched through the meaningful use of technology.

### *Pathfinders and forerunners of innovation*

3. Since 2008, six FutureSchools<sup>1</sup> have embarked on various technology-enhanced innovations which have resulted in positive student outcomes. Initial findings<sup>2</sup> from schools have reported higher levels of student engagement and deeper learning that support the development of 21st century competencies, such as self-directed and collaborative learning. The schools are now consolidating their innovations and experiences for the purpose of extending them to the wider education community.

4. The FutureSchools are active in sharing their experiences with other schools and have taken the initiative to organise various forums. Hwa Chong Institution held its first Education Conference with the theme of "Borderless Learning" in 2010, while Beacon Primary School has been organising an annual Research Conference since 2008. The FutureSchools have also hosted numerous learning journeys and visits by local schools and foreign delegates.

<sup>1</sup>

The current FutureSchools comprise Beacon Primary School, Canberra Primary School, Crescent Girls' School, Hwa Chong Institution, Jurong Secondary School and the School of Science and Technology.<sup>2</sup> MOE and IDA have been conducting lesson observations, interviews, focus group discussions and surveys to provide regular, evidence-based feedback to the FutureSchools for programme improvement.

5. On 16 April 2011, Crescent Girls' School will launch its Crescent Academy for Digital-Age Learning (CrADLe), which will facilitate conversation and professional sharing among schools that are keen to embrace digital age learning for the development of 21st century competencies.

6. The FutureSchools are characterised by a strong research culture and they have presented more than 50 research papers at local and international conferences<sup>3</sup>. Notably, Beacon Primary published its first research publication, "A School's Journey into the Future – Research by Practitioners for Practitioners", which showcased teachers' research findings and strategies for ICT integration, and was shared with the education fraternity. The book has also been published and sold in Japan.

7. The success of the FutureSchools@Singapore programme has been strengthened by the strategic partnership with infocomm industries. This has resulted in many new tools and applications that have transformed the classroom experience for both teachers and students. Consequently, these innovations have received strong local and international interest, with some products being marketed overseas and adopted by more than 50 schools locally<sup>4</sup>.

8. A FutureSchools innovation that has been adopted by other schools is the AmBook<sup>5</sup>, an interactive digital textbook which adopts an inquiry-based approach for the learning of science. The Ambook provides students with a rich repository of simulations and interactive learning content to enliven the learning of science.

#### *More FutureSchools to lead ICT in learning*

9. The two new FutureSchools, Nan Chiau Primary and Ngee Ann Secondary, possess a robust programme and deep capacity to experiment and innovate with ICT for learning and teaching on a school-wide level. They display a high level of readiness and are well poised to lead other schools in providing possible models for the seamless and pervasive integration of ICT into the curriculum.

10. In the next phase of the FutureSchools@Singapore programme, the FutureSchools will continue to deepen their capabilities in curriculum, research and ICT integration. The new FutureSchools will help to support the spread of successful innovations and foster a culture of innovation across schools.

11. More information on the two new FutureSchools can be found in Annex A.

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<sup>3</sup>

Some conferences include the International Conference for Teaching and Learning with Technology 2010 and the Global Learn Asia Pacific 2010: Global Conference on Learning & Technology<sup>4</sup>. Industry partners have started marketing their products locally and overseas, with some finding early commercialisation success. For example, local content-developer, Amdon, and learning management system provider, AsknLearn, have sold the Ambook (interactive textbook) and VARK (multimedia content) respectively to more than 50 schools locally. Amdon has also gained a foothold in the Hong Kong education market with the Ambook.<sup>5</sup> Piloted by Crescent Girls' School.

**HIGHLIGHTS OF NEW FUTURE SCHOOLS****Nan Chiau Primary School**

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Highlights Nan Chiau Primary School empowers pupils to take ownership and drive their own learning experiences, in collaboration with other learners. The school believes in equipping pupils with 21<sup>st</sup> century competencies, problem-solving and communication skills. As a new FutureSchool, Nan Chiau Primary plans to redesign its curriculum to leverage on emergent technologies such as mobile platforms. The school also plans to explore the use of technology to facilitate the learning of the Chinese Language. The school's professional development efforts over the years have built deep content knowledge and teaching competencies in the teachers. The school has achieved Spring Singapore's Innovation Class (I-Class) Award twice since 2007 for having a good system for managing and sustaining a vibrant culture of innovation and experimentation. It has also put in place a recognition scheme to acknowledge the innovation efforts of teachers and students. Nan Chiau Primary has consistently won the National Innovation Quality Circles (NIQC)<sup>6</sup> Gold Award since 2008. Partnerships with IHLs and industry The school has forged strong partnerships with local and international institutes of higher learning and industry partners to support its ICT programmes. Some examples include ongoing research with the Learning Sciences Lab, National Institute of Education (NIE), and collaborative projects with the Singapore Centre for Chinese Language (SCCL), Microsoft Singapore and Temasek Polytechnic.

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<sup>6</sup> NIQC is conducted by Spring Singapore, where external consultants from IHLs and industries are appointed to evaluate the effectiveness of participating innovations.

### **Ngee Ann Secondary School**

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Highlights Guided by Ngee Ann 2.0, which articulates the school's ICT framework, Ngee Ann Secondary's FutureSchool programme focuses on developing new models for the use of ICT in assessment. The school will use the Teaching for Understanding (TfU) approach to guide the design and implementation of its curriculum innovations and assessment tools. The school leadership strongly advocates the innovative and effective use of ICT for learning and teaching. More than 85 per cent of the teachers have received training in TfU with Technology, which allows for active engagement and participation in the development of curriculum innovations. HOLA: A Curriculum Innovation of Ngee Ann Secondary School In collaboration with Microsoft and ACP Computer Training & Consultancy Pte Ltd, the school developed a programme called HOLA (Heuristic Online Learning Agent), the world's first Windows Live Agent which acts as a multi-disciplinary peer tutor or learning buddy. The school aims to use HOLA to support self-directed learning through the use of Socratic Questioning. To date, it has developed HOLA Newton and HOLA Shakespeare to support the learning of Physics and Literature, respectively. As a Microsoft Mentor School, it is mentoring three Pathfinder schools from Australia, Vietnam and the Philippines in the use of HOLA.

## FACTSHEET ON FUTURESCHOOLS@SINGAPORE PROGRAMME

In June 2006, IDA launched Singapore's 10-year infocomm masterplan called the "Intelligent Nation 2015" or "*In twenty-fifteen*", to chart the innovative use of infocomm technologies in the various economic clusters. The aim is to ensure the country remains relevant and dynamic in today's new economy.

Using infocomm, the Education and Learning cluster seeks to deliver a more engaging learning experience to meet the diverse needs of learners. It does so by enabling access to the latest knowledge and new learning resources, making learning come-to-life with multimedia and interactive elements. Infocomm facilitates collaboration within and across learning communities, supports educators' efforts in customising teaching for different learners and creates an environment in which independent and life-long learning takes place.

One of the key efforts under IDA's iN2015 Education and Learning plan is to develop schools into peaks of excellence in an ability-driven education paradigm, and to encourage innovation and enterprise in schools. The development of the FutureSchools@Singapore aims to not only enhance the diversity of educational offerings to cater to learners' needs but to also provide possible models for the seamless and pervasive integration of infocomm technology that includes interactive digital media (IDM). The plan aims to position Singapore as a centre of innovation in the use of infocomm technology and IDM for the education and learning sector.

By harnessing infocomm technology in the education sector through innovative pedagogies and flexible learning environments, schools will be able to achieve higher levels of engagement of their pupils who already have an Infocommintegrated lifestyle. Thus, pupils will be equipped with the essential skills to be effective workers and citizens in the globalised, digital workplace of the future.

By 2015, up to 15 schools will be developed under the FutureSchools@Singapore to serve as beacons for the wider Education and Learning community. These schools will be identified as peaks of excellence that integrate infocomm holistically in every facet of the school environment.

In May 2007, then MOS (Education) Lui Tuck Yew announced five schools as the pioneer batch of FutureSchools@Singapore, namely: Beacon Primary School; Canberra Primary School; Crescent Girls' School; Hwa Chong Institution; and Jurong Secondary School. In March 2008, MOE named the School of Science and Technology (SST) as the sixth FutureSchool.