

The Digital Preschool – a prototype for tomorrow’s early education

Lien Foundation’s IngoT Preschool initiative gives a glimpse of what preschools of the future can be

Singapore. April 20, 2011

1. An apple a day keeps the mind active and work productive.
2. Children and teachers at the YWCA (Young Women’s Christian Association) Kindergarten and Childcare are using Apple iPhones, iPads and IT (information technology) as part of their learning experience and work. Every teacher is armed with an iPhone to take daily attendance and temperature, record observations and track the children’s progress. The Wii and an interactive whiteboard are regular learning aids for preschoolers used to today’s ubiquitous technology. Teachers use the iPad to interest and gain the attention of children with learning needs.
3. In a project conceived by the Lien Foundation, YWCA’s 11 preschool centres are being transformed by the use of technology to enhance early childhood education. “We see a widening technology chasm between the nonprofit preschool sector and mainstream schools in Singapore. Through this initiative, we hope to bridge the divide by developing the digital dexterity and creative capacity of nonprofit preschools,” said Lien Foundation’s CEO, Mr Lee Poh Wah. “We also want to boost their productivity and create an enabling environment for preschoolers to enjoy learning while playing.”
4. He added, “We had a good experience with our earlier IT project, called IngoT¹. It provided nonprofit healthcare providers with an integrated

¹ The name IngoT was coined to demonstrate how IT is stretching the potential of non-government organisations (NGOs).

platform to optimize their resources and improve service delivery.” IngoT’s success spurred the Foundation to launch IngoT Preschool with YWCA as its partner. In addition to improving the quality of preschool education, the IngoT Preschool initiative seeks to enhance the professional image of preschool educators in YWCA and incubate new models of learning for preschoolers.

5. Partnering the project’s architect and IT solutions provider **PulseSync**, Lien Foundation rolled out the \$800,000 project over 18 months. The IngoT Preschool initiative comprises the following main features:
 - **Childcare and Kindergarten Management System (CKMS)** which is accessible via web browsers and proprietary iPhone apps
 - **Financial, Donor Management & Dashboard System**
 - **IT & Learning Resource Centres:** a new Digital Learning Lab and Performance Hall in YWCA HQ and a Resource Lab in each of the 11 YWCA centres

6. “Today, IT is a significant part of the daily lives of young children, so it is important that their early childhood education experience help them develop such literacy and capabilities. IT can also support and enhance their learning,” said Mrs Leung Yee Ping, Executive Director, YWCA. “For many of us, the IngoT Preschool initiative is like a quantum leap into the future. The teachers have experienced for themselves the power of the IngoT Preschool app on their iPhones. The children can’t wait to go to school because they enjoy the interactive learning tremendously.”

Empowering Teachers

7. The project’s Childcare and Kindergarten Management System (CKMS) have empowered teachers in a new way. It lets them track, record and manage student information instantly on their iPhones. With their devices, they update the children’s daily attendance and state of health, record school fee collection, make student observation notes and maintain a log of the

communication between teachers and parents. Through the system, they can also share lesson plans with other teachers, supporting and strengthening each other's professional learning and development.

8. YWCA Bukit Gombak's Principal Grace Chan noted the way the IngoT Preschool initiative had improved her teachers' workflow, "We are now able to document, share, and reflect on the children's learning easily as the observations and information are easily keyed in or retrieved from the IT system. This knowledge base helps ensure continuity of care and support even when there is a change of teachers," she said.
9. This project has also created a new and enriching teaching experience for the preschool teachers. Teacher Ms Lee Wen Yuan from YWCA Pasir Ris Centre shared her experience, "To reinforce my thematic teaching, I would use the Maxplorer software on the interactive whiteboard. The children enjoy manipulating the tools to complete their activities. This interactive element not only enriches their learning experience, it has also given me new and creative ways to teach," she said.
10. Now that all the YWCA centres are centrally linked to the CKMS, communication and collaboration among the different centres have also leapfrogged. In addition, the system has strengthened the teacher-parent relationship significantly. "As I can record my student observations and my communication with their parents on my iPhone easily, I am able to keep parents up-to-date about their child's progress without difficulty," said Ms Lee. The parent-teacher partnership has also received another boost with the introduction of the children's e-portfolio. Parents are impressed by the way they can view and access their child's work, activities and progress – all recorded in a single CD.
11. Each YWCA centre now has a Resource Lab equipped with interactive whiteboards and touch-screen personal computers that children regularly

access. Over at the YWCA HQ in Outram, there is a spanking new Digital Learning Laboratory (DLL) comprising a Creativity Lab with a recording and music studio, a Connectivity Lab and a Discovery Lab to encourage experiential learning and experimentation. Children from each centre get to visit the DLL once every month. The interactive whiteboard, Wii and fun wall let the children learn through interactive games.

12. With a smile, Mdm Eswari d/o Sivanganam, mother of Daniel and Karina Sha said, “The children are very excited about this initiative. They chatter endlessly about what they’d like to do. Daniel even teaches his sister, Karina how to play certain games on the fun wall, in preparation for her trip to the lab.”

Creating Operational Efficiencies

13. Operationally, the project’s Financial and Donor Management module allows YWCA administrators and management to have a quick overview of its financial status, fundraising campaigns and outreach programmes. The Management Dashboard, one of its key features to be launched soon, will collate, consolidate and tabulate key performance indicators (KPIs) onto a single screen. At a glance, these on-demand snapshots give the YWCA management a bird’s eye view of all the 11 preschool centres. “Initially, many of us were apprehensive about whether we could cope with technology and the changes it would bring. Since implementing the project, we have been impressed by the benefits technology brings,” said Mrs Leung. “It has made a great difference in streamlining our operations. Our productivity has gone up and our teachers’ morale has risen considerably as they feel empowered by technology and the new ways of teaching.”

Preschool of the Future

14. Mr Ken Tan, Managing Director of PulseSync, reflected upon the task of building IngoT Preschool, “With training, the teachers were quick to pick up the skills to run and use the system. We are glad that the IngoT Preschool

initiative has shown how IT can be successfully used in early childhood education. It has also motivated and challenged the children and teachers by expanding and changing their usage and views of technology. In many ways, we hope that this can point many more early childhood providers towards harnessing IT for the future.”

See Annex A for more details on the features of IngoT Preschool initiative.

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About Lien Foundation

www.lienfoundation.org

The Lien Foundation is a Singapore philanthropic house noted for its model of radical philanthropy. It breaks new ground by investing in innovative solutions, convening strategic partnerships and catalyzing action on social and environmental challenges. The Foundation drives institutional capacity building to address crucial community needs, and empowers individuals to reach their full potential. It seeks to enhance educational opportunities for the disadvantaged, excellence in eldercare and environmental sustainability in water and sanitation.

The Foundation has pioneered the use of IT for healthcare nonprofits and nursing students in Singapore, and championed education for preschoolers in need.

About YWCA

www.ywca.org.sg

Founded in 1875, the YWCA envisions bringing women into a community of Christian fellowship to serve the society with love and compassion, and to provide quality programmes, facilities and services to advance the development and enrichment of women’s lives.

The YWCA has always been a pioneer in meeting the needs of our society through its active involvement in community and welfare services. As the YWCA is a non-profit organisation, it relies on the generous support of the public to continually improve and expand the community services that are made available to all, regardless of race, gender or religion.

The YWCA operates one Kindergarten and 10 Child Development Centres that provide quality childcare services to help mothers-at-work and mothers who need an alternative childcare arrangement.

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ANNEX A: ABOUT THE INGOT PRESCHOOL INITIATIVE

IngoT Preschool is an initiative conceived and led by the Lien Foundation to enhance early childhood education through greater use of IT (information technology).

The preschool involved is YWCA (Young Women’s Christian Association) Singapore, a nonprofit organization with one kindergarten and 10 childcare centres serving 850 children with 100 teachers and 20 administrative staff.

By deploying IT for teaching, learning and administration in the YWCA, the project seeks to:

- Increase the quality of teaching and teachers’ productivity
- Improve the children’s learning experience and environment
- Strengthen the teacher-parent relationship and communication
- Boost organisational efficiency by strengthening operations

Benefits

Teachers

Enhanced teaching capabilities
Knowledge sharing for support and collaboration
Smoother workflow and efficiencies
Greater productivity
Professional image boosted

Children

Enlivened learning experience and environment that stimulates learning
Collaborative and experiential learning
IT literacy and usage

Parents

Timely insights into child’s progress
Improved communication with teachers

Administrators

Better operations
Streamlined workflow and processes
Greater transparency and corporate governance

Features

Childcare and Kindergarten Management System (CKMS)

This online system lets the administrators, teachers and principals centrally manage preschool operations and enhance teaching capabilities. Exploiting the latest mobility technology, the IngoT Preschool App supports both online and offline modes, making accessibility of information extremely convenient.

Here are the highlights of what the CKMS allow users to do:

Student Management*

- Take daily attendance and temperature
- Process enrolments, class assignments, school fee collection
- Update health screening information
- Note observations of student learning and behaviour

Create Student e-Portfolio

- Create each child's Digital Portfolio that holds his or her worksheets, drawings, teachers' evaluations and memos.
- This e-portfolio can be easily shared with their parents online or through a CD.

Communication*

- Get instant e-alert messages from principal and fellow teachers.
- Maintain an updated record of teacher-parent communication notes.
- Have email access and an email account.

Administration

- Integrate fee collection with financial modules and external system (e.g. MCYS) for reporting purposes or application for subsidies.
- Generate monthly operation reports

Knowledge Management

Create, access, maintain and share:

- A repository of lesson plans, teaching resources and other multimedia content.
- A repository of children's portfolios and photos/videos of outings and lesson.

**These features are on each teacher's iPhone as well as the centres' computers.*

Digital Learning Laboratory

Located at the YWCA HQ in Outram, this well-equipped facility enhances the children's learning through play and lets teachers pursue innovative teaching methods. It comprises:

The Discovery Lab

- Where play is at the heart of learning. Children engage in interactive and video games, using popular gadgets like the Wii and an interactive fun wall.

The Creativity Lab

- Future "Singapore Idols" can make a recording of their vocal prowess in this music studio equipped with a recording device, mixers, video camera and musical instruments.
- A karaoke system lets children learn phonics by belting out their favourite nursery rhymes.

The Connectivity Lab

- Armed with a range of IT equipment including an interactive whiteboard, web cameras, computer aided learning software, this is where teachers conduct IT-related lessons and even hold web conferences with another YWCA centre.

The Performance Hall

- This mini-auditorium is where live performances, big-screen movies and story-telling sessions are held.

Resource Lab

Each preschool centre has a Resource Lab equipped with an interactive whiteboard, multimedia PCs, digital and video cameras, printer and a library management system.

The facilities encourage the children to explore and learn through playing and experimenting with these devices under the guidance of their teachers.

Financial, Donor Management & Dashboard System

Principals and administrators can view the school's finances, donations and human resources information at a glance, helping them better manage their financial operations.

- Using the latest Microsoft Navision Financial system, this feature forms the backbone of YWCA's operations. It will help the school's administrators to monitor the regulatory and corporate governance requirements as well as manage fundraising campaigns, sponsorships and donations.
- The Management Dashboard will consolidate the school's financial and donor information, giving management and board members an up-to-date and incisive insight into the school's financial status easily.