Crescent Girls’ School
Transforming Learning Through Technology as a FutureSchool in Singapore

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PRESENTATION OUTLINE

Singapore’s ICT Masterplan Journey
The FutureSchools@Singapore Programme
School-level Implementation: The Crescent Journey
Looking Ahead
SINGAPORE’S
ICT MASTERPLAN JOURNEY
ICT MASTERPLANS IN SINGAPORE

**Masterplan 1** (1997 – 2002)
- Basic infrastructure
- Curriculum
- Teacher Training
- Digital Learning Resources
- Research & Development

**Masterplan 2** (2003 – 2008)
- School autonomy & ownership
- Integration of ICT into curriculum for engaged learning
- Ground-up innovations

**Masterplan 3** (2009 – 2014)
- Develop competencies for self-directed & collaborative learning
- Differentiated professional development
- 21st century learning
THE FUTURE SCHOOLS@SINGAPORE
PROGRAMME
• Launched in 2007, during ICT Masterplan 2
• Play a key role to grow Singapore into a global Interactive and Digital Media (IDM) capital
• Push the frontiers of teaching and learning practices at a school-wide level by providing different models for engaged learning that leverage on ICT/IDM
• Use educational technology meaningfully and effectively to bring about engaged learning in every classroom not to develop “technology” schools focused solely on developing technological skills

• Engage in research to develop and evaluate new IDM tools and/or pedagogies

• 8 FutureSchools to date:
  – 6 from Phase 1 and 2 from Phase 2
FUTURESCHOOLS@SINGAPORE

Innovations in Teaching & Learning

Innovative Use of ICT Tools

Industry Partnership

RESEARCH
THE FUTURE SCHOOL ECOSYSTEM

Support & Governance

FS Implementation

Infocomm Development Authority

Industry Engagement

Industry & IHL Partners

Investment & Devt.
SCHOOL-LEVEL IMPLEMENTATION:
THE CRESCENT JOURNEY
THE CRESCENT JOURNEY

- LEAD ICT School
- TLLM Prototype School

- IT Demo School

Pre-1997

2003

2006

2007

m-learning: 1-1 computing programme

Start of FutureSchool Project
- school-wide transformation
  - development of technology solutions
HOLISTIC IMPLEMENTATION

- Leading technology-rich schools
- Professional development for staff
- Infrastructure planning & implementation
- Curriculum, Pedagogy & Assessment
- Collaboration with partners
- Research
Leading technology-rich schools

CHANGE MANAGEMENT FRAMEWORK
Vision

Disconfirmation  Commitment  New competence  Coherence  Consensus

The Human Side of School Change (Robert Evans, 1997)

Current Reality

Unfreezing

Disconfirmation  Complacency  Loss  Old competence  Confusion  Conflict
HOLISTIC IMPLEMENTATION

Professional Development for Staff

- Targeted training for ICT team
- Subject-specific ICT integration
- Protected PD time
- Customised training
- E-Coaches

SCHOOL-WIDE
- Essential ICT Skills
- Induction Programme
- Half-yearly Staff Seminars
- On-the-job Training

DEPARTMENT-WIDE
- Specialized

Professional development for staff
HOLISTIC IMPLEMENTATION
Infrastructure Planning & Implementation

- Fully wireless campus with high speed internet
- 1-1 computing environment
- Technology-enabled learning spaces
HOLISTIC IMPLEMENTATION
Curriculum, Pedagogy & Assessment

- Integrated Curriculum in Sec 1 – 3
- Blended learning
- Flipped classrooms
- Assessment of 21st century competencies
- 21st century pedagogies
5E MODEL OF ICT USAGE

EXCHANGE
Swop of traditional practices with ICT

ENRICH
Use of rich media and applications

ENHANCE
Learning through active learner use of ICT

COLLABORATIVE PROBLEM-SOLVING & KNOWLEDGE CREATION

EXTEND
ICT to support learning directed by learner

EMPOWER
ICT to support learner control of learning and creation of knowledge

LEARNER ENGAGEMENT

SHALLOW
PASSIVE
Teacher-Centred

DEEP
ACTIVE
Student-Centred
HOLISTIC IMPLEMENTATION
Collaboration with Partners

• Partners, **not** vendors
• Cultivating synergistic relationships with partners
• Win-win outcomes
• Scalable technology solutions, **not** turnkey projects
HOLISTIC IMPLEMENTATION

Research

- All teachers conduct action research
- Evidence-based evaluation of outcomes
- Research programme to examine the impact of technology on development of 21st century competencies
THE CRESCENT JOURNEY

**Pre-1997**: IT Demo School

**2003**: LEAD ICT School
**TLLM Prototype School**

**2006**: m-learning: 1-1 computing programme

**2007**: Start of FutureSchool Project
- school-wide transformation
- development of technology solutions

**2011**: Completion of Key Technology Solutions

**2012**: m-learning 2.0 CrADLe
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- Develop competencies for self-directed & collaborative learning
- Differentiated professional development
- 21st century learning
“A leading academy in empowering schools to transform learning in the digital age.”
Objectives

- **Guide and provide support** for schools that are keen to embrace digital age learning;
- **Facilitate the professional development of teachers** in the meaningful infusion of technology to develop 21st century competencies, including self-directed and collaborative learning;
- **Transfer the learning** of Crescent Girls’ School’s ICT journey to other schools;
- **Help develop Singapore as a worldwide showcase** of digital age learning.
SIX STRANDS

Leading technology-rich schools
Professional development for staff
Infrastructure planning & implementation
Consultancy
Collaboration with partners
Research
LOOKING AHEAD

• From Self-Directed/Collaborative Learning to Collaborative Problem-Solving/Knowledge Creation
• From assessment of 21st Century Competencies to development of 21st Century Competencies
• From action research to in-depth research
• From explicit use of technology to ubiquitous use of technology
• From CrADLe (local) to CrADLe (global)
THANK YOU

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