e-Learning for the future of Hong Kong

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Background Opportunities ...

National 13th Five-Year Plan

President Xi Jinping: economic growth in the Mainland in the next five year will not be less than 6.5%.

World Population 7.209 billion (Dec 2014 US Census)

World population 8 billion (Expected in 2040)

The Belt and Road

Establishment of the Innovation and Technology Bureau (ITB)

Moderately prosperous society
Enhance GDP per capita

Elderly population in HK (65 and above)
2014 - 15%
2054 - 35%
Background: What will our students need?

What does our world need?
What does Asia/China need?
What does Hong Kong need?
Background

What is like in 2030?

On going support

- Whole person development
- Information literacy
- Innovation
- Entrepreneurship
- Collaboration

https://upload.wikimedia.org/wikipedia/commons/8/80/TrafficSigns_HK_cropped.jpg
Background

17 Sustainable Development Goals, UNESCO 2015

https://sustainabledevelopment.un.org/partnerships
GOAL 4

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

https://sustainabledevelopment.un.org/partnerships/goal4
Background

UNESCO: World Education Forum 2015

Incheon Declaration

Education 2030: Towards inclusive and equitable quality education and lifelong learning for all

China as a member state of UNESCO

Background
Incheon Declaration, UNESCO 2015

- Gender equality
- Right to education
- Inclusion and equity
- Sustainable development
- Quality education
- Global citizenship education
- Legal and policy frameworks that promote accountability and transparency
- Quality lifelong learning opportunities
- Strengthen science, technology and innovation
Background

Hong Kong Education: From Good to Great

• McKinsey & Company’s international research report (2010) - How the world’s most improved school systems keep getting better.
Actions to achieve “Right to education”

• Provided Pre-primary Education Voucher Scheme since 2007/08 school year for direct fee subsidy for kindergartens.

• Extended free education from 9 to 12 years since 2008/09 school year.

• Provided full subvention for full-time courses operated by the Vocational Training Council (VTC) for Secondary 3 school leavers, giving senior secondary students an alternative free avenue to conventional education.

• A report on Free Education will be published to address the concerns in Kindergarten education.
The Recurrent Expenditure Estimates on education in the 2015-16 financial year is $71.4 billion, representing 22% of total expenditure. (exceeding the suggested amount by UNESCO)
Actions to achieve “Inclusion and equity”

• 60 aided special schools catering for children with visual impairment, hearing impairment, physical disability, intellectual disability, and emotional and behavioural difficulties.
• additional resources and professional support for public sector ordinary schools to help teachers cater for students with SEN.
**Actions to achieve “Inclusion and equity”**

**Non-Chinese Speaking Students**

- **Measures at primary and secondary levels**
  - Chinese Language Curriculum Second Language Learning Framework
  - Applied Learning Chinese (Level 1 to 3 of Qualification Framework)
  - Additional recurrent grant for schools admitting 10 or more NCS students
  - Chinese Language Learning Support Centres
  - Summer Bridging Programme

- **Measures at higher education**
  - Accept alternative Chinese Language qualifications from GCSE, IGCSE, GCE in JUPAS
  - Subsidy for taking the above examinations
Actions to achieve “Quality Education”

• Equal opportunities for all, regardless of the gender
• On-going renewal of the curriculum in view of the strategic position of HK as part of China
• On-going strengthening of infrastructure, resources, teachers’ development and supports to stakeholders
• On-going evaluation of outcomes and progress
Actions to achieve “Quality Education”
The Fourth Strategy on IT in Education (ITE4)
Actions to achieve “Quality Education”

STEM Education

1. Renew curricula
2. Enrich learning activities for students
3. Provide learning and teaching resources
4. Enhance professional development of schools and teachers
5. Strengthen partnerships with community key players
6. Conduct reviews and disseminate good practices
Actions to achieve “Quality Education”

Access and inclusion

• Provision of WiFi infrastructure and tablets as start up for all schools under the Fourth Strategy on IT in Education
Actions to achieve “Quality Education”
Open educational resources

• Provision of resources and supports by Hong Kong Education City
Actions to achieve “Quality Education”
Curriculum and Pedagogy

...Tracking of learning progress
Actions to achieve “Quality Education”
Curriculum and Pedagogy

• Identify four priority theme in education
  – Self-directed learning
  – Collaborative learning
  – Problem solving, creativity, computational thinking through coding
  – Ethical use of IT

• Apply IT skills across school curricula and unleash the potential of ICT to achieve greater quality in education and transform learning

• Strengthening STEM education for down-to-earth innovation
## Actions to achieve “Quality Education”

### Curriculum and Pedagogy – Strengthening IL Framework for ethical use of information

<table>
<thead>
<tr>
<th>Information Literacy</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>1</strong> Effective and Ethical use of information for lifelong learning</td>
<td>Use and communicate information <em>ethically and responsibly</em></td>
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<td><strong>2</strong> Generic IL</td>
<td><strong>Identify</strong> and <strong>define</strong> a need for information</td>
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<td><strong>3</strong></td>
<td><strong>Locate</strong> and <strong>access</strong> relevant information</td>
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<td><strong>4</strong></td>
<td><strong>Evaluate</strong> information and information providers, in terms of authority, credibility and current purpose.</td>
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<td><strong>5</strong></td>
<td><strong>Extract</strong> and <strong>organise</strong> information and <strong>create</strong> new ideas</td>
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<td><strong>6</strong> Information World</td>
<td>Be able to <strong>apply IT skills</strong> in order to process information and produce user-generated content</td>
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<td><strong>7</strong></td>
<td><strong>Recognise</strong> the roles and functions of information providers (e.g. libraries, museums, internet) in the society</td>
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<tr>
<td><strong>8</strong></td>
<td><strong>Recognise</strong> the conditions under which reliable information could be obtained.</td>
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Actions to achieve “Quality Education”
Curriculum and Pedagogy

• Strengthen Language and Reading across curriculum
• Strengthen Generic skills and the delivery
• Highlight Values Education as an important asset in Chinese virtue.
Actions to achieve “Quality Education”
Enhance Teachers’ Repertoire

• Rethinking the role of teachers as action learners and fostering collaborative learning culture
  – 80 teachers seconded to Education Bureau to participate in various seed projects, curriculum development, school-based support services, etc. in current school year
  – Incentivise teacher innovation through Quality Education Fund
    • A bottom up approach for innovation
    • 135 IT projects for a total of 34.9 billions for 2014/15 school year
Actions to achieve “Quality Education”
Enhancing teacher’s repertoire

• Staff support: Professional development programmes on curriculum design / course design all through the strategies, in particular addressing effective use of technology since the 3rd strategy.
Actions to achieve “Quality Education”
Enhancing Teachers’ capacity with the TPACK model and Teaching Repertoire (the old and the new)

- Collaborative Learning
- Self-Directed Learning
- Field Trip Learning/WWL
- Flipped Classroom
- e-assessment
- Catering for Learner Diversity

E.g.
- IT infrastructure
- Learning Management System
- Mobile Devices
- E-resources (e.g. e-textbooks, Apps, tools)

In 8 KLAs
- Information Literacy

Tertiary Institutions

IT Sector

CoE/ IT in Ed Section, CDI

NGO

Technological Knowledge

Pedagogical Knowledge

Content Knowledge
Actions to achieve “Quality Education”
Changes in e-Learning landscape

• Peer support: community of practices through district-based / subject-based / issue based supports by Centre of Excellence schools
Support from Centre of Excellence Schools since Sept 2015

- Support at school level e.g. mobile learning and applications in classroom settings 58%
- Technical Support e.g. cloud services, Office 365, Google Education etc 22%
- Pedagogical support for individual subjects 17%
- Support students with SEN 3%
Actions to achieve “Quality Education”

Strengthen collaboration in the community

- Engage students in life-wide learning (LWL)
- Cater for the talents
- Engage parents
- Strengthen provision in general public
Actions to achieve “Quality Education”

Strengthen collaboration in the community

LWL: Youth Coding Jam 1000
Actions to achieve “Quality Education”

Strengthen collaboration in the community

Cater for the talents: Enriched IT classes
Actions to achieve “Quality Education”
Strengthen collaboration in the community
Engage parents: Hotline + Mini-conferences

www.hkedcity.net/parents_elearningseries
Actions to achieve “Quality Education”

Strengthen collaboration in the community

Provision in public: libraries / museums
Actions to achieve “Quality Education”

Strengthen collaboration in the community for STEM
A top performer

- PIRLS 2011 (1st, literacy at age 10)
- PISA 2012: 3rd in Mathematics; 2nd in reading and 2nd in Science (2009: 3rd, 4th and 3rd respectively)
- TIMSS 2011: Maths (P4–3rd, S2–4th), Science (P4–9th, S2–8th)

Achieving excellence through equity (OECD 2013)

- 2nd in 65 countries/economies in its performance in Mathematics and equity in education outcomes

Highly competitive among cities/ countries (WEF 2014)

- ranked 7th in the Global Competitiveness Index 2014-15
- basic requirements (infrastructure, health & primary ed, etc) –3rd (2nd last year)
- efficiency enhancers (technological readiness, higher ed & training, etc) —3rd (3rd last year)
Actions to achieve “Quality Education”

Use of research data

- International: PISA / TIMSS / PIRLS
  - Right technology should be used for the right tasks at the right time
- Pilot Scheme on e-Learning in Schools
  - Identifying success factors in e-Learning

Success factors: common vision, teachers’ willingness to learn new things, good communication with teachers and parents, building on schools’ existing values and cultures, administrative mechanisms to provide space for co-planning and sharing, sufficient PDPs on pedagogy on e-Learning, strong leadership support, building up of organizational structure and routines to support e-Learning.
Actions to achieve “Quality Education”

Use of research data

• Centre of Excellence as test-bed for innovation
  – Delineate desirable and undesirable in view of various learning needs of students at various age

• Explore the potential of big data for enhancing online learning

Use of Sandbox to teach Geography
Actions to achieve “Quality Education”: Synergy and Knowledge management
Actions to achieve “Quality Education”

Global partnership

GOAL 17
Strengthen the means of implementation and revitalize the global partnership for sustainable development
Actions to achieve “Quality Education”

Persistence

GENIUS IS 1 PERCENT INSPIRATION AND 99 PERCENT PERSPIRATION.

Thomas Edison


Thomas Alva Edison, Harper's Monthly (September 1932 edition)