

**Briefing Session on the New Support Measures under the Fourth Strategy** on IT in Education (ITE4)

School-based Implementation of the Information Literacy Framework for Hong Kong Students

### **Prof. Kong Siu Cheung**

Professor of Department of Mathematics and Information Technology Director of Centre for Learning, Teaching and Technology The Education University of Hong Kong The Emergence of Information Literacy (IL)

The 21st century learners need:

- **Requisite knowledge** of information processing
- **Proper attitudes** toward the use of IT



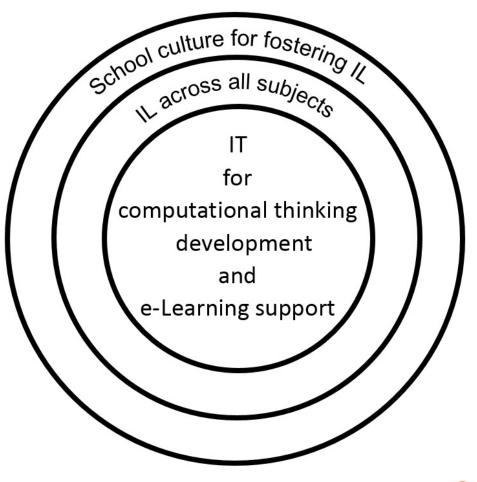
# IL: Capacity Building

The process that develops:

- the ability to gather, synthesize, analyze, interpret, and evaluate information
- the ability to work independently and socially
- the ability to participate in, benefit from and contribute to the knowledge society and the wider global community



# School-based Implementation of IL Framework





## Three Elements for School-based Implementation of IL Framework

### **IT for Computational Thinking Development and E-Learning Support**:

- IT: Programming Education for Computational Thinking Development
- IT: Elements which involve the application of IT as a productivity tool, a communication tool, a collaboration tool, a research tool and a decision-making tool for developing computational thinking skills

#### IL across All Subjects:

 Opportunities for students to apply IL for learning tasks across all subjects under the 8 Key Learning Areas (KLAs)

#### **School Culture for Fostering IL**:

In-school and extra-curricular service learning activities that involve the use of IT to cultivate students' positive attitudes towards the use of technological artefacts and the desirable attributes of citizenship that are beneficial to society



### Three IL Implementation Models

- Component a. IT/ Library lesson coordinating model
- Component b. Curriculum infusion
- Component c. Use PBL to foster IL

#### Model 1

a. IT/ Library lesson coordinating model

b. Curriculum infusion

#### Model 2

a. IT/ Library lesson coordinating model

c. Use PBL to foster IL

#### Model 3

b. Curriculum infusion

c. Use PBL to foster IL



### Roles of All Subjects for IL Development: Linking IL with 8 Key Learning Areas (KLAs)

Chinese Language Education KLA:

Chinese Language, Chinese Literature, Putonghua

English Language Education KLA:

English Language, English Literature

Mathematics Education KLA:

Mathematics

Science Education KLA:

[Primary] General Studies [Secondary] Science, Biology, Chemistry, Physics, etc.

Technology Education KLA:

[Primary] Computer Awareness Program, Computational Thinking Education, etc.

[Secondary] Computer Literacy, Design and Technology, Home Economics, Technology and Living, etc.

Personal, Social & Humanities Education KLA:

[Primary] General Studies

[Secondary] Integrated Humanities, Liberal Studies, Civic Education, History, Geography, Economics, etc.

Arts Education KLA:

Visual Arts, Music

Physical Education KLA:

Physical Education

### IL Framework for Hong Kong Students: 8 Literacy Areas

#### Effective and Ethical use of information for lifelong learning

Literacy Area 1: Use, provide and communicate information ethically and responsibly

#### Generic IL

- Literacy Area 2: Identify and define a need for information
- Literacy Area 3: Locate and access relevant information
- Literacy Area 4: Evaluate information and information providers, in terms of authority, credibility and current purpose
- Literacy Area 5: Extract and organise information and create new ideas

#### Information World

- Literacy Area 6: Be able to apply IT skills in order to process information and produce usergenerated content
- Literacy Area 7: Recognise the roles and functions of information providers (e.g. libraries, museums, internet) in the society
- Literacy Area 8: Recognise the conditions under which reliable information could be obtained



### Subject-specific Integration of IL Framework: From Information Processing Perspectives

Personal, Social & Humanities Education KLA:

[Primary] General Studies

[Secondary] Integrated Humanities, Liberal Studies, Civic Education, History, Geography, Economics, etc.

*Chinese Language Education KLA:* Chinese Language, Chinese Literature, Putonghua

*English Language Education KLA:* English Language, English Literature

- Literacy Area 1: Use, provide and communicate information ethically and responsibly
- Literacy Area 2: Identify and define a need for information
- Literacy Area 3: Locate and access relevant information
- Literacy Area 4: Evaluate information and information providers, in terms of authority, credibility and current purpose
- Literacy Area 5: Extract and organise information and create new ideas



### Subject-specific Integration of IL Framework: From Creative and User-generated Content Perspectives

Arts Education KLA: Visual Arts, Music

Physical Education KLA:

**Physical Education** 

Chinese Language Education KLA:

Chinese Language, Chinese Literature, Putonghua

*English Language Education KLA:* English Language, English Literature

*Personal, Social & Humanities Education KLA:* [Primary] General Studies [Secondary] Integrated Humanities, Liberal Studies, Civic Education, History, Geography, Economics, etc.

- Literacy Area 6: Be able to apply IT skills in order to process information and produce usergenerated content
- Literacy Area 7: Recognise the roles and functions of information providers (e.g. libraries, museums, internet) in the society
- Literacy Area 8: Recognise the conditions under which reliable information could be obtained



Promoting IL through E-Learning in School (1): Schools with E-Learning Integration in Holistic Curriculum

For schools which implement e-Learning across the holistic school curriculum

- Elements of IL framework of all the 8 Literacy Areas should be integrated with e-Learning activities across 8 KLAs
- Three IL Implementation Models
  - Component a. IT/ Library lesson coordinating model
  - Component b. Curriculum infusion
  - Component c. Use PBL to foster IL



Promoting IL through E-Learning in School (2): Schools with E-Learning Integration in Selected Subjects

For schools which implement e-Learning in selected topics of selected subjects

- The integration of IL framework can be started with Literacy Area 1 to Literacy Area 5 in e-Learning activities in the selected topics of selected subjects
  - Literacy Area 1 Effective and Ethical use of information for lifelong learning
  - Literacy Area 2 to Literacy Area 5 Generic IL
- Example In the subject-specific e-Learning activities with information search on the Internet, students can be provided with the opportunities to:
  - compare the information from different websites critically
  - identify and comment on the information providers
  - decide and explain which websites are reliable



## Types of Parental Support for E-Learning Implementation

|     | Type of support        | Description   |
|-----|------------------------|---|
| 1)  | ICT-supported learning | Acquisition of hardware and learning resources:         |
|     | environment at home    | purchasing of hardware such as computers, tablets,      |
|     |                        | printers and writing pads; learning resources such as   |
|     |                        | e-books and online supplementary exercises              |
| 2)  | Operational support at | Sources selection and validation, printing, Chinese     |
|     | home                   | word typing, basic operation such as copy and paste,    |
|     |                        | bookmarking websites and finding key words              |
| 3)  | E-Learning policy at   | Time arrangement, time limitation, location of using    |
|     | home                   | digital devices (e,g, living room) for open access, not |
|     |                        | using tablet at home                                    |
| (4) | Fundraising for school | Support for school to buy new equipment such as         |
|     |                        | computers, tablets, e-Learning materials and online     |
|     |                        | exercises   |

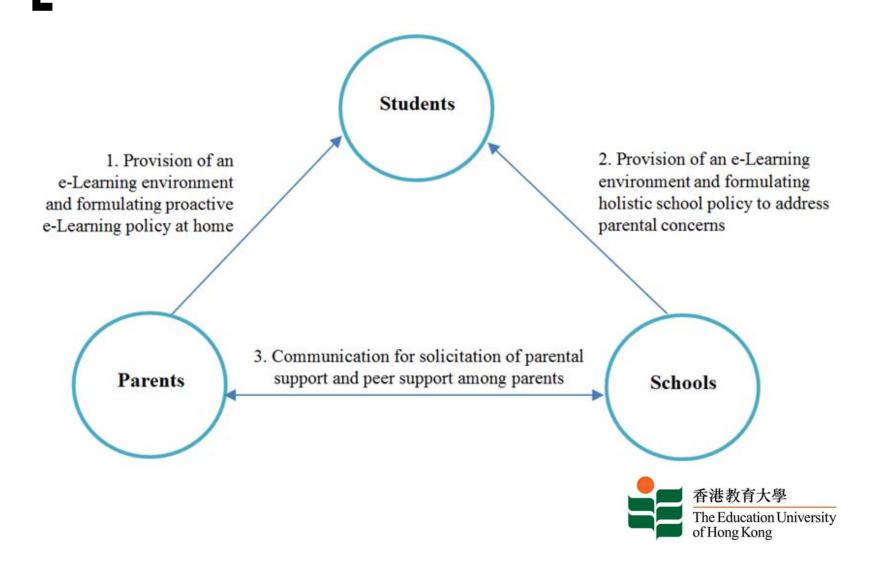


## Types of Parental Concerns about E-Learning Implementation

|    | Type of concern                               | Description  |
|----|---|--|
| 1) | Excessive use of ICT                          | Deteriorating interpersonal and handwriting skills due to<br>overreliance on digital devices; abusing digital devices for<br>non-educational purposes resulting in addiction |
| 2) | Physical well-being                           | Damaging eyesight and vertebral health due to prolonged contact with digital devices or inappropriate posture  |
| 3) | Exposure to unsuitable content                | Exposure to unsuitable content such as violence and<br>pornography online and contact with inaccurate and<br>incomplete information  |
| 4) | Negligence of school tasks                    | Spending excessive time on digital devices for doing assignments and learning  |
| 5) | Plagiarism of homework                        | Copying directly from information online to finish<br>assignments; increasing the probability of cheating via digital<br>devices   |
| 6) | Disadvantaged home e-<br>Learning environment | Making children less competitive due to the lack of financial support to sustain e-Learning  |



Partnership between School and Parents for Promoting E-Learning among Students



Critical Issue 1 for School-Parents Partnership for Promoting IL

- **Parents should take the responsibility of both** monitoring and supporting their children's use of ICT at home.
- Parents are recommended to set up proactive home policies in order to carry out their leading roles in three directions to encourage active, constructive and interactive learning:
  - monitoring daily personal activities
  - supporting ICT usage for learning
  - setting reasonable expectations Ο



Critical Issue 2 for School-Parents Partnership for Promoting IL

- Schools should set up policies in a holistic manner to address parental concerns.
- Schools need to set up a comprehensive policy to cover up resource needed for such as:
  - physical settings concern at home for e-Learning
  - preventive measures to resolve negative concerns
  - proactive initiatives for positive development of e-Learning capability and attitude



Critical Issue 3 for School-Parents Partnership for Promoting IL

- A desirable partnership between school and parents is collaboration with interactive communication and peer support among parents.
  - **Parents** should be able to understand e-Learning and  $\bigcirc$ the holistic e-Learning policy of the schools and to channel their concerns to schools.
  - Schools should foster parental understanding of e-Ο Learning and to communicate with parents about the school holistic e-Learning policy to address their concerns.



Main Concerns for Fostering School-Parents Partnership for Promoting IL

Role of parents:

**To lead proactive e-Learning policy at home** to monitor, support and inspire e-Learning

Role of schools:

**To formulate holistic policy to address concerns of parents** responsively and proactively to gain support

Importance of interaction:

- School-parents communication
- Peer support among parents



# Conclusion

- IL competence is important for students in the 21st century
- Students need to develop this competence through a seamless transition between the school and the home
- School should collaborate with parents to foster the IL competence of students beyond class time
  - Providing an **IT-supported learning environment** for more continuous, explorative, and creative learning activities
  - Exerting a **reciprocal influence** on the moral, social, and educational development of students





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**Thank You!** 

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