Seminar for the Third Consultation on New Senior Secondary Curriculum and Assessment Framework –

Information and Communication Technology

Oct. 2006
Highlights of Today’s Seminar

- Background and Purposes
- NSS ICT Curriculum and Assessment Guide
  - Learning and Teaching
  - Resources and Supporting Measures to schools
  - Public Assessment
- Question and Answer
The Third Consultation on NSS C & A Framework – ICT

Background and Purposes

Mr. TANG, Kin-hung
Chief Curriculum Development Officer (C & S)
Curriculum Development Institute
New Senior Secondary Curriculum & Assessment Guide -- ICT

 NSS ICT Curriculum and Assessment Guide
- Learning and Teaching
- Internal Assessment
- Resources and Supporting Measures to schools

Question and Answer

Mr. SO, Koon-keung Teddy
Curriculum Officer (Technology Education)
Curriculum Development Institute
Feedbacks were collected from different consultations through seminars and surveys:

- October 2004 – January 2005 (1st consultation)
- June – September 2005 (2nd consultation)

Implementation
Feedback from Second Survey on the New Academic Structure for Senior Secondary Education and Higher Education Subject: Information and Communication Technology
335 returns from schools

<table>
<thead>
<tr>
<th>Strongly Agree /Agree</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aims and rationale is good</td>
<td>97.6%</td>
</tr>
<tr>
<td>Level of difficulty of the learning content is adequate</td>
<td>86.6%</td>
</tr>
<tr>
<td>Breath and depth of the learning content is adequate</td>
<td>84.8%</td>
</tr>
<tr>
<td>Relevant to students’ needs</td>
<td>86.6%</td>
</tr>
<tr>
<td>Flexible in catering for learner differences</td>
<td>60.8%</td>
</tr>
<tr>
<td>Sequencing and flow is good</td>
<td>82.7%</td>
</tr>
<tr>
<td>Balance between fundamental knowledge and specialized learning is good</td>
<td>82.7%</td>
</tr>
<tr>
<td>Maintain a balance of knowledge, skills and attitudes</td>
<td>83.3%</td>
</tr>
<tr>
<td>Promote learning to learn abilities</td>
<td>72.5%</td>
</tr>
</tbody>
</table>
International Benchmarking

- National Foundation for Education Research (NFER), United Kingdom
  - Assessment and Qualifications Alliance (AQA)
    Information and Communication Technology (GCSE)
  - Edexcel
    Information & Communication Technology (GCSE)
  - Scottish Qualifications Authority (SQA)
    Information Systems (Higher)
  - WJEC
    Information & Communication Technology (AS/ A GCE)

- The University of Waikato, New Zealand
## Benchmarking Criteria

<table>
<thead>
<tr>
<th>Curriculum aims, learning targets &amp; objectives</th>
<th>Organisation of learning elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Independence Learning</td>
</tr>
<tr>
<td>Generic Skills</td>
<td>Self-evaluation</td>
</tr>
<tr>
<td>Thinking</td>
<td>Values and Attitude</td>
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</table>

### Pedagogy

<table>
<thead>
<tr>
<th>Pedagogy</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td>Engagement</td>
</tr>
<tr>
<td>Emphasis</td>
<td>Strategies</td>
</tr>
<tr>
<td>Relevance</td>
<td>Grouping</td>
</tr>
</tbody>
</table>
Further Development

- Fine-tuning the curriculum coverage
- Demonstrate the balance between theoretical and practical learning
- Examples to illustrate how
  - the proposed curriculum aims can be achieved and assessed
  - to cater for learners’ differences and development of students’ high order thinking and generic skills
The ICT curriculum framework was introduced in the NSS Understanding and Interpreting the ICT Curriculum seminars:

- June – July 2006 (701 teachers attended)

Changes of the curriculum framework since the 2nd consultation were explained in details with sharing from experience computer teachers
Chapter 1 - Introduction

- Background
- Rationale
- Curriculum Aims
- Interface with Junior Secondary Curriculum and Post-Secondary Pathways
- Coping with Technology Advancement
- Cross-curricular Links
Chapter 2 - Curriculum Framework

- Design Principles
- Learning Targets
- Learning Objectives
- Curriculum Structure and Organisation
Chapter 3 - Curriculum Planning

- Guiding Principles
- Progression of Studies
- Curriculum Planning Strategies
  - 3.3.1 For students of different abilities and inclinations
- Curriculum Management
  - 3.4.2 Roles of different school personnel (ICT teachers, ICT Panel / TE KLA Coordinator, school head)
Chapter 4 - Learning and Teaching

- Knowledge and Learning
- Guiding Principles
- Approaches and Strategies
  - Echo with different learning targets stated in 2.2 -- Knowledge and Understanding, Skills, Values and Attitudes
- Quality Interaction
- Catering for Learner Diversity (4.5 example 12)
- Building a Learning Community (4.6 example 13)
Approaches to Learning and Teaching

Learning as ... 
- Learning Community
  - Meaningful learning
  - Generic skills
  - Content knowledge (sources, understanding, structure and nature)

Teaching as...
- Direct instruction
- Enquiry
- Co-construction

What is worth learning? (curriculum)
- Example 1 (P.88)
- Example 4 (P.90)
- Example 6 (P.91)
- Example 7 (P.92)
- Example 8, 9 (P.93, 94)
- Example 10, 11 (P.95, 97)
- Example 13 (P.100)

How is knowledge learnt? (pedagogy and assessment)
- Example 2, 3 (P.89)
- Example 5 (P.90)
Chapter 5 - Assessment

- The Roles of Assessment
- Formative and Summative Assessment
- Assessment Objectives
- Internal Assessment
  (e.g. practical tasks, written tests, projects, oral questioning; an integral part of learning & teaching, not “add-on” activities; quality feedback)
- Public Assessment
Chapter 6 – Effective Use of Learning and Teaching Resources

Differences between the 2nd and the provisional final draft:

2\textsuperscript{nd} Draft  \hspace{2cm}  Provisional Final Draft

Chapter 6
Effective use of learning and Teaching Resources

Chapter 6
Effective use of learning and Teaching Resources

Chapter 7
Supporting Measures
Chapter 6 – **Effective Use of Learning and Teaching Resources**

- Purpose and Function of Learning and Teaching Packages
- Guiding Principles
- Types of Resources
- Flexible Use of Learning and Teaching Resources
- Resource Management
- Funding
Types of Resources

- **References**
  - Textbooks (for the Compulsory Part)
  - Reference Materials (Reference books, journals, newspaper, magazines, etc.)
  - Government and non-government reports and publications

- **EMB resources**
  - Senior Secondary Curriculum Guide, Curriculum and Assessment Guide and Key Learning Area websites
  - Web-based e-learning platform
  - E-Learning and teaching resources packages
  - Glossary of computer terms
  - Funding
E-Learning Training Package on the AS-level Computer Applications (ASCA) and A-level Computer Studies (ALCS) Curricula

Purpose

This project is carried out by INSTEP, Faculty of Education, University of Hong Kong, for Education and Manpower Bureau, Hong Kong to provide online support for professional development of teachers teaching the revised AS-level Computer Applications (ASCA) and A-level Computer Studies (ALCS) Curricula.

The most critical element of the success of curriculum improvement is the input from teachers. Hence this project will draw on the experience of teachers, provide them with some useful information they may need as part of their professional development and take them as important partners in shaping the curriculum change. Teachers will be encouraged to use this as a platform to interact, raise questions, exchange views, and to share experience and resources.

- ALCS & ASCA Curricula
- Content Organisation
- Teacher Interactions
- Other Online Resources
- Our contact

Content Organisation
Types of Resources

- The Internet and technology
  - Multi-media resources
- Community resources
  - Professional organisations (e.g. HKACE, AiTLE)
  - Industry partners
  - Government bureaux and departments
    (e.g. HKPF, TELA, IPD, InfoSec, CESY, etc.)
The Oracle Academy helps students develop database design, programming, and professional skills, and provides teachers with world-class training and professional development.
## Supporting Measures - Professional Development Programmes

<table>
<thead>
<tr>
<th>Learning &amp; Teaching Strategies for ICT</th>
<th>06/07</th>
<th>07/08</th>
<th>08/09</th>
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<tbody>
<tr>
<td>- Catering for Learner’s Diversity</td>
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<td>- Quality Interaction</td>
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<tr>
<td>(Critical thinking, Creativity &amp;</td>
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<td>Problem Solving)</td>
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**Assessment**
Relevant Information
Public Assessment

Mr. NG, Ka-ming Jonathan
Manager - Assessment Development
Hong Kong Examination and Assessment Authority
Question and Answer
3 October, 2006

Mr. WONG, Kwong-wai Raymond
Vice Chairman of CDC-HKEAA Committee on Information and Communication Technology (Senior Secondary)
Principal of New Method College

Ms. WONG, Ka-man
Teacher of New Method College

Mr. NG, Ka-ming Jonathan
Manager - Assessment Development
Hong Kong Examination and Assessment Authority

Mr. Sin Tak Wah
Chief Curriculum Development Officer (Technology Education), CDI

Mr. WU, Man-wai David
Senior Curriculum Development Officer (Technology Education), CDI
4 October, 2006

Mr. NG, Hok-ling
Chairman of CDC-HKEAA Committee on Information and Communication Technology (Senior Secondary)

Mr. CHEUNG, Kin-sun
Teacher of Ho Ngai College

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Manager - Assessment Development
Hong Kong Examination and Assessment Authority

Mr. WU, Man-wai David
Senior Curriculum Development Officer (Technology Education), CDI
Thank You!