Curriculum, Pedagogy and Assessment

How do we know whether students have learned?
How do students learn and teachers teach?
What is worth learning?

Alignment for student learning

Adapted from Booklet 3, Senior Secondary Curriculum Guide (CDC, 2009)

Catering for Learner Diversity

School Organisation Level
- Wide choice of subjects, eg. Chinese & IELTS
- Forming a class based on co-operation and lead

School Curriculum Level
- Flexible grouping
- Extended time table for remedial

Class / group Level
- Multiple learning groups

Systemic Level
- Whole school planning
- Whole school learning culture
- Whole school learning environment

Human Resources Deployment:
- 4.4 Learning support

Booklet 7, Senior Secondary Curriculum Guide (CDC, 2009)

Curriculum Framework

Compulsory Part
Elective Part
School-based Assessment

Information Processing
- Computer System Fundamentals
- Internet and its Applications
- Basic Programming Concepts
- Social Implications

Databases
- Data Communications and Networking
- Multimedia Production and Web Site Development
- Software Development

(Choose ONE out of four)

Adapted from Information and Communication Technology Curriculum and Assessment Guide (Secondary 4 – 6) (CDC and HKEAA, 2007)

Learning Progression: Commonly Seen Teaching Sequence

Compulsory Part
Elective Part

S4
Information Processing
Computer System Fundamentals
Internet and its Applications
Databases

S5
Basic Programming Concepts
S6
Social Implications

(Choose ONE out of four)

Adapted from Booklet 7, Senior Secondary Curriculum Guide (CDC, 2009)
Assessment: A Framework of School Assessment Practices

Example of a Diversified Assessment Plan

Mode of Assessment

<table>
<thead>
<tr>
<th>Mode of Assessment</th>
<th>Examples of Learning Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-year written examination</td>
<td>Understand how data are organised and represented inside a computer</td>
</tr>
<tr>
<td>Final written examination</td>
<td>Compare common methods for Internet access in terms of speed, cost, security and availability</td>
</tr>
<tr>
<td>Online quizzes (self-assessed)</td>
<td>Describe how errors can be detected and prevented by using validation and parity checking</td>
</tr>
<tr>
<td>Project work</td>
<td>Design and construct web pages for an intended audience</td>
</tr>
<tr>
<td>Oral questioning</td>
<td>Discuss the common services available in a networked environment</td>
</tr>
<tr>
<td>Practical tasks (Teachers’ observation)</td>
<td>Convert multimedia elements into digital format</td>
</tr>
<tr>
<td>Students’ self-reflection</td>
<td>Appreciate how advances in information and communication technologies foster the emergence and development of the Information Age and to recognise its impact on our society</td>
</tr>
</tbody>
</table>

Think about …

- How do I organize the 3-year senior secondary curriculum?
- Any difficulty I have in designing school-based curriculum?
- Up to now, is there any problem encountered in student learning? What is this?
- Did I spent a lot of time handling (students’) …
  - assessment → test? Project assignment for SBA?
  - consolidate basic skills/knowledge → forget, re-teach, re-test?
  - learning problems → remedial teaching?
Difficulties in designing school-based curriculum and assessment

- Gauge the breadth and depth of curriculum
- Hauled by “project assignment”?
- Lay solid foundation for students
- In curriculum organization,
  - integrate compulsory and elective parts
  - connect SBA “project assignment” with teaching
- Design multi-tier exam paper at different stage of learning

Key Points for Case (1)

- Curriculum Planning
  - Spiral curriculum design to learn complex topics in phases
  - Specific timetabled lesson assigned for practical activities every week, such that learning of theory and practical topics was arranged in parallel
- Assessment Planning
  - Diverse mode of assessment (oral questioning, individual projects etc.)
  - Short and focused assessment
  - Conduct short MC quiz using online platform to provide immediate quantitative and qualitative feedback

Key Points for Case (2)

- Curriculum Planning
  - Guide students to learn more complex topics only after basic subject knowledge of the topic was taught and consolidated
  - Elective part was taught immediately after the completion of related compulsory module
- Assessment Planning
  - Short questions included in exam paper in initial stage
  - Gradual change of number of papers, number of questions and mark allocation in exam papers by phases to match the HKDSE style
  - Peer evaluation on performance-based assignment

Key Points for Case (3)

- Curriculum Planning
  - Adapted curriculum based on school context to help student master fundamental subject knowledge in early stage
  - Offer option in the elective part based on students’ preference
- Assessment Planning
  - Promote self-regulated learning using strategies like open book quiz and “peer” evaluation across levels
  - Build up students’ self-confidence and enhance student motivation in learning using tiered assignment and multi-tier summative assessment
Contextual Learning: Automatic Teller Machine

- Relationship with the curriculum
  - Information Processing
  - Computer System Fundamentals
  - Internet and its Applications
  - Basic Programming Concepts
  - Social Implications
  - Databases
  - Data Communications and Networking
  - Multimedia Production and Web Site Development
  - Software Development
- How to apply context (scenario) in assessment?

Guiding Questions Examples for the Conduct of SBA

1. Have you had any meaningful use of formatting features in the project report? (p.14)
2. Have you justified the use of devices in the project? (p.19)
3. Have you valued and appraised the significance of the development of the communication technology for your project? (p.25)
4. Have you habitually used the modular approach to handle the problems in the project? (p.29)
5. Have you considered intellectual property and privacy when doing the project? (p.32)

Guiding Questions Examples for the Conduct of SBA

6. Have you well defined the scope of the project?
7. Have you well planned the project timeline?
8. Have you well communicated with the project stakeholders?
9. Have you considered the environmental factors of the project such as the availability of hardware and software resources and the understanding of the relevant knowledge?
10. Have you considered the latest developments of the topics concerned?

A. Have you applied database concepts such as integrity constraints? (p.39)
B. Have you produced the needs analysis and represented it in a diagram? (p.50)
C. Have you produced dynamic and interactive elements such as interactive user selection and data validation and manipulation in your web site? (p.60)
D. Have you considered alternative algorithms with different complexities and data structures? (p.63)
When planning school-based curriculum and assessment …

- Integrate
  - Teaching of compulsory and elective parts
  - Daily teaching with SBA
- Towards self-regulated learning (SRL)
  - Lay solid foundation for students
  - Teacher guides students towards SRL
- Progressive learning and assessment
  - Enhance self-confidence and ability
- Teaching in accordance with individual abilities
  - Each in his own way while aligned with C&A guide

Evaluate and adjust school-based curriculum

- Evaluate teaching
  - Effective used of curriculum time?
  - Appropriate assessment?
  - Target (standard) aligned?
  - Teacher and students know each other well?
- Self reflection
  - Review students’ learning outcome
  - Try discovering student learning problems
  - Evaluate and adjust school-based curriculum
- Collaboration and Professional Exchange