Actions with Direct Impact on Learning and Teaching Inside and Outside Classroom

5. Effective Learning and Teaching Strategies

- We can motivate students by expressing due expectations of them, and build learning and teaching on their success (even when it is small). We should avoid behaviour that ignores their emotional reactions and hurts their self-esteem. There is both intrinsic and extrinsic motivation, which includes informal rewards such as verbal recognition and prizes. It is essential to strike a balance between the two rather than to depend only on the latter.

- To motivate students with weaker performance, teachers may structure the tasks to suit their abilities and let them experience success, pride and confidence in having attained a goal through reasonable effort. Individual progress and improvement should be recognised.

- Schools should provide students with an appropriate level of curriculum to suit the capability of the students, but should beware of lowering their expectations of students.

- Schools should also encourage students to inquire beyond the confines of "curriculum prescriptions" and textbooks, and to process information and make their own judgements in order to enhance their knowledge-building capacity.
• We should not view mixed ability groups as problematic, though sometimes groups that are homogeneous in ability work better. Students of different abilities can learn well together (e.g. through co-operative learning) if the learning processes allow them to contribute different ideas at different levels. Learning from peers and collaboration helps to remove the feeling of failure and provides the emotional basis to boost motivation and learning.

• Different forms of classroom organisation (such as variations in grouping, whole-class setting and seating arrangements) facilitate the delivery of diverse learning and teaching strategies such as and whole-class teaching, group learning and individual works. But they do not automatically result in the desired effect without suitable lesson/activity planning, teacher-student interaction, learning and teaching resources and other factors affecting effective learning and teaching.

• Understanding can be treated as a means of solving problems. We can help students to move from being recipients of knowledge to seeing the relationships between ideas, applying ideas, and ultimately thinking critically and creatively and constructing knowledge.

• Some people may think that understanding and memorisation contradict each other. This is not true. Understanding something is usually the best way of remembering it. So when students are trying to make sure that they will remember something, they are not necessarily engaged in rote-memorisation. They may simply be trying to understand and remember something at the same time.

• Teachers can give students opportunities to express themselves openly and share their work in class and publicly to enhance their confidence.

• Teachers can capitalise on opportunities (e.g. current affairs, school/classroom contexts) to facilitate spontaneity and change in responding to different demands and situations. This widens the exposure of students and helps them to learn in a changing environment.

• It is important to vary the role of teachers, parents and students in different learning and teaching strategies to achieve different purposes. Teachers’ roles range from a transmitter of knowledge to resource person, facilitator, consultant, counsellor, and assessor.
Teachers can use different learning and teaching strategies to achieve the different purposes of learning and to suit the learning styles, abilities, interests and needs of students. There is no fixed rule regarding which strategy is the best. Teachers master learning and teaching strategies differently. They can develop the repertoire which is most effective for them to enhance the independent learning capabilities of students for whole-person development.

We can widen student learning through life-wide learning opportunities outside the classroom, such as on the school premises, at home and in the community, and organise co-curricular activities to complement classroom learning.

The attitudes and abilities of students are also profoundly influenced by students’ family background, experiences and life circumstances. Teachers have to understand their students, and adapt to the needs of students in collaboration with counsellors, parents, peers, social workers and other sources of community support.

6. Assessment for Learning

Assessment is the practice of collecting evidence of student learning. It is an integral part of the learning and teaching cycle rather than a separate stage at the end of teaching. It helps to provide information for both students and teachers to improve learning and teaching (assessment for learning). Yet there is also a need for assessment to select students at senior secondary level for higher education (assessment for selection).

Both the processes (e.g. inquiring, independent learning, use of generic skills, reflections) and the products of learning (e.g. knowledge/concepts, problem-solving capacities) are important in student learning. Evidence of student learning should be collected by the assessment methods most suited to them (e.g. oral tests for oral communication, discussion for collaboration, presentation/performance for creativity, tests and examinations for knowledge).
• Hong Kong has relied on written tests and examinations as major methods of public assessment as well as within schools. Written tests and examinations assess the products of learning such as memory, understanding of knowledge and concepts at a certain point in time. However, independent learning capabilities and other learning experiences are better reflected in the processes of learning rather than in tests and examinations. Therefore, the latter would have a narrowing effect on learning if they continued to dominate assessment in Hong Kong. Curriculum change will not succeed without corresponding changes in assessment.

• It is therefore important for public assessment, the Basic Competency Assessment recommended by the Education Commission, and assessment in schools and classrooms to:
  ➩ assess students on what and how they are expected to learn in the curriculum
  ➩ use different modes of assessment suited to the purposes and processes of learning (e.g. projects, observation, portfolios, tests, examinations) throughout the school years
  ➩ avoid excessive assessment, and unproductive uses of dictation, memorisation, and assessment for the sake of recording only

• The idea of assessment for learning is not new. It is underpinned by the confidence that all students can learn and that assessment can contribute to better learning. The following practices will encourage assessment for learning:
  ➩ Schools can develop a school assessment policy and practices consistent with widening the space and opportunities for learning and emphasising independent learning capabilities, e.g. more diversified modes of assessment, more value attached to creativity, expression of ideas, knowledge building and catering for learner differences (with different contents, modes of assessment, and different expectations of students).
  ➩ Schools can make better use of the space left by the abolition of the Academic Aptitude Test (AAT) in primary schools for more meaningful learning activities.
  ➩ Schools and teachers can use feedback (e.g. informal, formal, verbal, written), whenever appropriate, to inform students of their strengths and weaknesses. Students will then be motivated by recognition of their achievements and they will also know what steps they need to take to address their weaknesses.
Basic Competency Assessment (BCA) consists of “Student Assessment Programme” which is for P1 to S3 students, while “System Assessment Programme” is for P3, P6 and S3 students only.

Teachers can share with students the goals of learning and let them recognise the standards they are aiming for in order to enhance students’ ownership of learning.

Teachers can take the opportunities to do assessment collaboratively with students, or allow students to assess work among themselves (peer assessment) or by themselves (self-assessment). These modes of assessment will promote reflective thinking and self-improvement, which are qualities of independent learning.

Teachers can use assessments to find out what and how students think, probe students’ higher order thinking skills, creativity and understanding of concepts rather than rote memorisation of facts.

Schools can use the "Student Assessment Programme" of the Basic Competency Assessment (Eng, Maths, Chinese) at P1 to S3. This will be offered by the government as a complementary tool to diagnose students’ weaknesses and strengths as one basis for improving learning and teaching.

Schools can help students to develop a portfolio of learning and assessment throughout the school years. (A collaborative research and development project will be developed in both primary and secondary schools.)

Schools should include key attitudes, self-management, and moral and civic qualities in report cards as part of student achievement and also as a basis for further improvement.

Schools can set their own baseline of student achievement suited to the background of students and schools, and also as a basis for planning for their own progress.

To support the above, the CDC will undertake the following measures at the systemic level to ensure that public assessment is consistent with the curriculum, i.e. what students are expected to learn:

- develop evidence-based quality criteria in line with the curriculum framework, to help teachers judge the performance and progress of students in relation to the learning targets

- work with HKEA to develop combined curriculum and assessment guides for various examination subjects (such as the pilot guides for AL Biology, CE Computing Studies and Applications), so that the scope and modes of assessment are consistent with the learning objectives and contents
liaise with the university sector and relevant agencies about broadening university admission criteria and about other means of providing information on student achievement (e.g. portfolios)

7. Four Key Tasks

- It is often asked what teachers can do to help students develop independent learning capabilities through KLAs and across KLAs more readily. The following four key tasks are recommended:
  - Moral and civic education.
  - Reading to learn
  - Project learning
  - Information technology for interactive learning,

- They are recommended for the following reasons:
  - Moral and civic education is one of the five essential learning experiences. Development of positive attitudes and a sense of commitment provide the affective basis for students to learn more effectively.
  - Reading to learn and project learning are not new. Schools and teachers can easily make good use of them to promote more independent learning capabilities and achieve the learning targets of the school curriculum.
  - Information technology is becoming part of daily life. It develops the competency needed for gaining access to large amounts of information and for closer interaction with different people and parts of the world.

- The four key tasks are inter-connected. Schools can use any of them as an entry point to strengthen their students’ independent learning capabilities and help them ultimately to achieve the objectives of in all four tasks. For instance, a focus on reading to learn helps students to do better in project learning, which involves searching and reading different kinds of materials. Similarly, project learning requires students to read widely for information, develop critical thinking and construct personal knowledge.

- Schools and teachers are advised to adopt, for each task, appropriate strategies that have an effect on learning and achieving relevant learning targets, rather than focussing the activities superficially and causing futile effort.
Moral and Civic Education

Key messages about moral and civic education:

- Moral and civic education is one of the essential learning experiences required for whole-person development and is vital in helping students build up positive values and attitudes.

- A holistic perception of moral and civic education covering various issues related to value development such as sex education, environmental protection, media education, religious education, ethics and healthy living is proposed for promotion in schools.

- In the domain of values and attitudes, national identity, a positive spirit, perseverance, respect for others and commitment to society and nation are the five values and attitudes regarded as paramount to students’ personal development during the short-term phase of 2001-02 to 2005-06.

- The implementation of moral and civic education should be learner-focused. Learning opportunities should be provided for students to develop and reflect on their values and attitudes using events relevant to their daily life.

- In the school context, principals and teachers are crucial facilitators in students’ value formation. Various means of support will be provided to enhance their professional competency, empowering them to be effective facilitators in developing students’ positive values and attitudes.

Strategies to promote moral and civic education:

- It is necessary to involve various key players such as schools, parents, government departments, non-government organisations and various sectors of society. Measures will be taken to collaborate with them and to strive for a concerted effort in bringing about desirable outcomes. For the effective promotion of this goal, different key players play different roles as follows:

  ⇒ Students

  - Students should take an active role in participating in learning opportunities, both inside and outside the classroom, to cultivate their values;

  - They need to constantly reflect upon their own values and be committed to them.
Teachers

- Teachers can help students develop positive values and attitudes through their interaction with students;
- An open learning and teaching culture has to be developed to nurture students’ moral and civic development;
- Teaching through deed is crucial in developing positive values and attitudes among students.

School

- A favourable school ethos and learning environment should be created, conducive to developing students’ values and attitudes;
- Life-wide learning opportunities should be provided for students to build up their values and attitudes.

Parents

- Collaboration has to be established with schools in helping students cultivate positive values and attitudes.

Other key players

- Life wide learning opportunities should be provided to promote moral and civic education, such as learning through service;
- Support can be provided to enhance teachers’ and parents’ capabilities in helping students develop positive values and attitudes.

Reading to Learn

Key messages about reading:

- Reading is not just for the improvement of language proficiency, but serves many other important purposes, which add value to the quality of our life. These include reading for interest, appreciation, enrichment of knowledge and experience.
- The choice of reading material should not be confined to storybooks. Quality reading materials embracing different text-types can be chosen from a wide variety of sources (printed and non-printed) to widen students’ exposure and knowledge.
Reading can take place anytime and anywhere. Students can be encouraged to read during reading lessons, library periods, after class and at home. This enables students to develop a good reading habit.

Some students will read on their own if they are interested in reading. However, their interest needs to be sustained. Uninterested readers need to be motivated, supported and taught how to read. The ultimate aim is to develop students into independent, willing readers.

To monitor students’ reading is important. It is equally important to help students review their own progress in reading. Through establishing a reading profile, for instance, a clear picture of the reading habits, achievements and problems of the student can be gained for remediation and recognition purposes.

Strategies to promote reading to learn:

- The promotion of reading is not the business of language teachers alone. The whole school has to become involved. Whole school involvement lays the foundation of a reading culture within the school. Language teachers may focus more on the teaching of reading strategies and skills while other teachers encourage students to broaden their knowledge and exposure through reading materials with different subject content. The librarian plays a crucial role in developing students’ information skills. Administrators can provide a mechanism which favours collaboration on reading among departments.

- Schools can also draw upon the support of parents and the resources of the community (e.g. public libraries, the mass media, educational and youth organisations) in promoting a reading habit and culture among students.

- The existing time-table can be re-structured to cater for new needs. For instance, the designation of a reading time during school hours enables students to read regularly on their own or with the help of their teachers.

- The provision of incentives can be an effective method to motivate students to read. The good use of reading schemes, reading programmes, etc. can help sustain students’ interest and effort in reading.

- The availability of quality reading materials, computers and software packages in the school library is crucial to attracting students to read at school and to extend their reading habit beyond school time.
Project Learning

Key messages about project learning:

- Project learning is a powerful learning and teaching strategy to promote self-directed, self-regulated and self-reflecting learning.
- It usually starts with challenging questions or problems, and involves students in working together or individually plan, read and take decision over a period of time.
- Project learning enables students to connect knowledge, skills, values and attitudes and to construct knowledge through a variety of learning experiences.

Strategies to encourage project learning:

- Teachers play a crucial role in project learning by offering the sort of structure that enables students to take risks without fear of failure. Teachers can vary their role, leading, guiding, supporting or merely facilitating as students become more independent in the learning process.
- Use generic skills such as problem-solving, critical thinking, collaboration and self-management skills in the learning process, and use communication skills to present the product.
- Begin a project with a focused question or problem. Approach the question or problem from different perspectives, using and integrating knowledge, skills, values and attitudes from different KLAs. The collaboration of subject teachers is of great significance in promoting inter-disciplinary projects in schools.
- Students develop their skills at different key learning stages. For example, P1-3 students use observation skills and simple information skills; P4-6 students search for information using different media, such as reference books, CD-ROMs and the Internet, and begin to analyse information; S1-3 students would use all these processes and evaluate the information themselves to generate personal ideas.
- Arrange different projects for different levels of students:
  - e.g. Collaborative projects for S1-3 on an issue:
    - S1 – reading and searching for information
    - S2 – setting questionnaires and interviewing
    - S3 – scientific investigation.
School-based curriculum plan for project learning can provide students with coherent and continuous learning experiences.

- e.g. Arrangement by KLAs/themes:
  - S1 – PSHE
  - S2 – Science KLA
  - S3 – Arts across KLAs.

- Students of varying competencies may work on different tasks which suit their capabilities but should share their work with others so that they learn from each other.

- Students can be assessed in the following ways:
  - continuous feedback is recommended for focusing on giving advice instead of providing only a grade
  - authentic performance assessment should be employed for reporting on the rich knowledge and skills acquired
  - feedback related to different dimensions of learning is preferred to the giving of a single grade
  - students’ reflections can be an integral part of assessment and parents can also contribute their views

**Information Technology (IT) for Interactive Learning**

**Key messages about IT for interactive learning:**

- Information technology for interactive learning complements strategies of learning and teaching inside and outside the classroom but it neither replaces them nor the role of teachers. IT helps learning in the following situations:
  - Providing audio/visual aids for difficult concepts
  - Searching for information from various sources and handling large quantities of information
  - Allowing students to work at their own pace, including using specially designed software
  - Interaction between the learners, resources and teachers
  - Collaboration between learners and teachers
  - Facilitating the acquisition of information, the development of critical thinking and knowledge building, especially under proper guidance
• Students can learn essential IT skills in different ways, such as through school subjects of Computer Literacy, Computer Studies and Information Technology, through integration of IT skills in other subjects, and/or through learning and practising outside lesson time.

• It is not necessary for teachers to be experts in IT skills before they can use IT for learning and teaching, though the rapid advancement of IT does present a challenge to teachers and others in society. Teachers can take the opportunity to empower themselves, enhance their work through an appropriate use of IT skills, and experience the pleasures and difficulties of life-long learning, which will enable them to give students the useful guidance in the coming years.

• A well-prepared lesson harnessing IT in the situations described above can be vivid and interesting. Teachers are not required to develop commercial grade IT-based learning and teaching resources. They need to know how to select, adopt and use available and appropriate IT-based resources. At times, they may need to develop a small number of such resources, but the principle is that they use IT resources that facilitate student learning.

• IT also facilitates student learning through drawing on:
  ➢ Presentations by teachers or students
  ➢ Multimedia learning packages providing rich sensory stimuli for enhancing students’ understanding
  ➢ Simulation and modelling tools for exploratory learning
  ➢ Interactive CAL packages for the active participation of students in the learning process
  ➢ Non-specific communication tools or electronic discussion forums for student reflections and the expression of views

• IT complements other learning and teaching strategies. However, excessive and improper use of IT becomes distracting and sometimes annoying with little or no educational value.

• IT resources, especially the Internet, provide authentic contexts for students to learn in joint projects, sometimes with students in another part of the world. Collaborative learning, however, usually begins with students interacting face to face with their fellow students. There are reports that IT tools help to build closer relationships between students through collaborative learning, but there are also worries that they form a barrier separating the skilful from the less skilful. Teachers need to observe and monitor progress closely to ensure that desirable outcomes are achieved.
Strategies to promote IT for interactive learning:

- Curriculum leadership can be nurtured in schools to help promote IT for interactive learning. The IT coordinators in schools, or the more competent teachers, should be given the responsibility of helping others to integrate IT into the curriculum. They should also conduct school-based development programmes and nurture a culture of using IT for interactive learning. The most important thing of all is to share and reflect upon whether the use of IT has helped students achieve the learning targets/objectives set for particular learning tasks, and to adjust strategies accordingly. The priority is not for teachers to develop packages for others and advance their own IT skills.

- Teachers should be encouraged to use a variety of student-focused learning strategies (e.g. project-based learning, issue-based learning, etc.) so that students are provided with opportunities to use IT to acquire and construct knowledge in the various knowledge domains.

- Students benefit from teachers’ guidance in:
  - searching for information purposefully
  - appraising the credibility of the information
  - organising and presenting the information logically and coherently
  - protecting themselves when exploring the different frontiers of the Internet
  - constructing knowledge and concepts, and knowing whether they are making progress
  - applying ethics in using IT, such as respect for intellectual property (a school may have a house rule for it)

- IT is a good communication and learning tool. Opportunities should be given to students to organise and present their ideas or assignments with the support of IT in class. Students should be encouraged to communicate and share information electronically for collaborative problem-solving with teachers and peers throughout their course of study, so that the use of IT skills becomes a useful means and not an end.
8. Effective Use of Textbooks and Learning /Teaching Resources

- Well-written textbooks developed in accordance with the new curriculum framework will serve the purpose of effective learning and teaching. Textbooks should be written for students. They should provide the core elements of learning in KLAs or subjects recommended by the CDC, develop critical and creative thinking and other generic skills in the learning resources and activities provided, and also open up space for learning through suggestions that go beyond their confines. Quality textbooks help students to achieve learning targets and objectives, consolidate what they have learned, and extend their personal knowledge.

- Teachers can use textbooks as the basic resource for learning and teaching activities, but not as the only resource. Teachers should use materials in textbooks selectively, rather than feel that they have to finish teaching the whole textbook even when the material is not entirely relevant to students’ abilities and interests. Teachers can adapt textbooks to the different needs of the students and complement them with other learning resources (e.g. different media, the natural environment, people, the Internet and other community resources).

- Knowledge transmission alone is no longer adequate. Learning activities in textbooks should be used flexibly to help students to actively integrate, practise and apply new knowledge. Activities that involve students in interaction with each other can actively engage them in the learning process.

- Teachers are advised to use their professional judgement to select tasks and exercises provided in textbooks, make use of a variety of educational sources, or develop learning and teaching resources based on the needs of their students.

- Teachers can help students to learn from a variety of resources (e.g. media, objects, people) and authentic situations rather than focus on textbook knowledge alone.

- The ED will continue to review textbooks written to support curricula recommended by the CDC. A Recommended Textbook List will be compiled and updated to facilitate the choice of textbooks. Schools can refer to the List when choosing textbooks for their students. Schools can choose not to use textbooks if they are able to provide students with other learning and teaching resources better suited to implementing the curriculum.
9. Catering for Learner Differences

- The suggestions in sections 4, 5, and 6 in this chapter are universally applicable to catering for student diversity when they are used to address different students’ needs. The suggestions below try to highlight some significant points which address the issue more deeply.

- Every student is different in cognitive and affective development, social maturity, ability, motivation, aspiration, learning styles, needs, interests and potential.

- The factors explaining learner differences include: innate differences in intelligence, differences in social and economic background, variations in past learning experience, variation motivation to learn, and perhaps variations in the level of congruence between the learner and the curriculum. The fact that a child does not seem to learn as well as other children in a certain area may be due to a number of factors which are outside the child’s own control. Schools may refer to 《小學加強輔導教學計劃指引》 (Education Service Division, Education Department 2001) for guidance.

- Schools, teachers, parents, students and the community should make concerted efforts to help every student learn.

- Catering for learner differences is intended neither to narrow the gap between individuals nor to even out their abilities and performance. The actions taken to cater for learner differences should involve trying to understand why certain students are unable to learn well and find appropriate ways to help them learn better. Otherwise, the gaps between the high achievers and the low achievers will widen as children move through progressive stages of schooling.

- A positive self-perception is crucial to student motivation for learning. The most immediate means to raise the self-esteem of students is to encourage their strengths in sport, practical skills or dance and thus give recognition to their special abilities. There is no need to force students to be good at everything.

- Teachers can use a diversity of resources (print, human, electronic) rather than focus only on textbooks. Teachers can make use of a spectrum of intelligences and multi-sensory experiences to tap the different potential of students, especially lower achievers.

- Schools can use different modes of assessment to find out the strengths and weaknesses of students, and then decide on the appropriate curriculum, learning and teaching strategies for them.
There is no need for a school to have standardised assessment practices if the students’ abilities are wide ranging. Constant failure with no recognition of any personal achievement will de-motivate weaker students.

- In view of the complexity of the factors underlying individual differences (social, curricular, pedagogical, psychological and personal), a multi-dimensional consultancy project has been launched. It is adapting the curriculum, learning and teaching strategies and assessment as a means to cope with learner difference in the context of Hong Kong schools. We hope that there will be other projects to fill gaps in the social and psychological arenas.

- Practices that have worked, based on evidence, include:
  - Using co-operative learning
  - Varying teaching from the viewpoint of the students
  - Cross-level subject setting
  - Pacing learning and teaching according to the abilities of students
  - Using information technology as a learning tool (http://cd.ed.gov.hk/rep/Eindex.htm)

- Useful practices will be continuously disseminated for the reference of schools in the curriculum bank described in Chapter 5. Teachers are encouraged to develop their repertoire to cater for the unique needs of their students through reference to useful experiences, mastery of learning and teaching techniques, and the supportive measures given in Chapter 5.

- With regard to catering for students with high potential (the gifted), a three-tiered gifted education programme funded by QEF is being piloted from 2000 to 2002 (http://cd.ed.gov.hk/sen/giftedproject.htm). All schools can work at Level 1, in which students’ potential in higher order thinking, creativity, and personal-social competence can be stretched through the learning and teaching of KLAs in regular classrooms. Experiences from pilot projects at Level 2 (school-based pull-out programmes) and Level 3 (special enhancement programmes with outsourcing support) will be further developed and disseminated in due course.

- As for catering the special educational needs of students, reference could be made to the web site http://serc.ed.gov.hk developed by the Special Education Resource Centre, Education Department.
10. Homework

- Homework is an important factor for academic success in Asian communities. It is therefore to be seen as a friend to learning rather than as a foe.

- Quality homework encourages independence in learning at home (e.g. reading, projects), consolidates, extends and applies learning at school (exercises, reading, revision).

- Quality homework should avoid drilling such as excessive copying, repetitive exercises (without purposeful meaning), and it should never be excessive (not more than half an hour for lower primary and an hour for upper primary students).

- Quality homework should promote the reinforcement of higher order thinking and the motivation to strive for excellence.

Actions via Partnership with Other Organisations and Sectors

11. Life-wide Learning Opportunities for Whole-person Development

- Life-wide learning offers learning opportunities conducive to whole-person development. It offers learning in real contexts, and experiential learning that cannot be provided by classroom learning, especially in moral and civic education, physical and aesthetic development, career-related experiences and community service.

- It complements some aspects of learning in the eight KLAs which are less effectively achieved in the classroom, e.g. conducting urban surveys in geography, marine investigation into biodiversity, and artistic appreciation in museums.

- It also offers experience of interdisciplinary studies, e.g. making a decision about the use of a piece of land.

- It should focus on processes and their impact on learning rather than "quantity" and "activity formats".

- New initiatives need to be supported by research and development to inform our understanding of how students change in terms of values, attitudes and actions.

- The choice of life-wide learning activities should be both school-based and learner-focused as it is more geared towards personal development. A related web site is available at http://cd.ed.gov.hk/life-wide/main/default.asp for reference.