ICT in Curriculum, Pedagogy, and Assessment

This key strand aims to integrate ICT seamlessly in the planning, design and implementation stages of curriculum, assessment and pedagogy. [1]

Students will be taught ICT skills which are aligned to current syllabus and the national examinations. This is to educate students to communicate well and work in teams.

Students will have to use ICT to search for materials that will aid in their studies and give feedback to peers.

Under this key strand, there are a series of projects:

- 10'C, 10'M, 10'T
- Baseline ICT Standards
- English Language Oracy Portal (ELOP)
- iMTL Portal
- Interactive Heritage Trails
- Propel-T
- SEED-ICT
- we-Learn Portal

Projects under ICT in Curriculum, Pedagogy, and Assessment

10'C 10'M 10'T

In year 2008, the Educational Technology Division (ETD) of Ministry of Education Singapore (MOE) launched the 10'C program in collaboration with 10 schools.[2]

10'C is a Chinese Language based ICT learning and teaching program aimed at improving student’s competency level of Chinese language. With the use of Information Communication Technology (ICT), the program stirs the interest of students towards learning Chinese Language in a highly interactive environment. The 10'C project is modeled after a teaching program advocated by Professor He Ke Kang from the School of Educational Technology, Beijing Normal University. It aims to promote and facilitate independent learning through extensive peer interaction amongst students.

Schools participating in this project allow their students to have access to a library of reading materials that facilitate them to compose their own writings in Chinese language. Students use computers to input their thoughts and express themselves online through hanyu pinyin input. This method of expression of ideas is beneficial to students who face difficulties in the usual writing on paper which involves memorising Chinese Characters. With the 10'C portal and the computer, there are fewer barriers to maximising the full potential of student’s writing skills.

Since 10'C inception in 2008, 40 schools have participated in this program. An example is Dazhong Primary School which adopted this program in year 2009. Currently, Dazhong Primary School has 5 selected Chinese Language classes participating in this program.[3]

In 2010, the program was adapted for Malay (10'M) and Tamil Language (10'T).[4]

Baseline ICT Standards
Baseline ICT standards is an online guide to assist educators in schools to plan and implement ICT in the school curriculum. This guide is a reference to schools and teachers have the flexibility to adopt the suggestions in the guide to plan their lessons. [5]

There are 4 key stages in the Baseline ICT guide. Each of the stages represents the fundamental level of knowledge, skills and moral values that students need from a lesson incorporated with ICT. Every stage focuses on students of different levels and different skill sets that are needed by the student.[6]

Cyber wellness skills are also part of the guideline so that students can learn good netiquette and manners.[7]

**English Language Oracy Portal**

The English Language Oracy Portal utilise interactive digital media (IDM) to provide highly stimulating learning experience for the students with the aim of motivating students to learn and converse in the English Language. [8]

This portal will jump start in June 2011 in Yu Neng Primary School and Yusof Ishak Secondary School. Currently, EL Oracy Portal is still in its developmental stage, an Interactive StoryBook and a Virtual World Role-playing Game are being developed.

**iMTL Portal**

The iMTL Portal is a web-based interactive portal tailored to improve students’ learning of interactive communication in Mother Tongue Languages via meaningful evaluations. [9]

This Portal enables students to build language foundation in the process of systematic learning of vocabulary and sentence structures. It will also offer opportunities to learn oral presentation and interactive communication. Through task-based activities, the iMTL Portal will assist self-directed and collaborative learning with the effective use of ICT tools. Furthermore, teachers can further design suitable learning resources or customize the questions sited in the central repository after the provision for the usage of open tools. The iMTL Portal will have improved the accessibility and supply of rich media contents that can assist teachers when conducting teaching within and beyond the classrooms.

One of the schools that is piloting the iMTL Portal would be Bendemeer Secondary School. Concurrently, their Tamil Language unit conducted a research study to find out the impact of iMTL Portal in enhancing students’ learning in the Tamil Language. [10]

The iMTL Portal is expected to roll out to all schools in Singapore in 2012.

**Interactive Heritage Trails**

In line with the objectives of C2015 to develop confident, self-directed, concerned and active contributors to society, and also the 3rd ICT Masterplan’s vision of “harnessing ICT effectively to develop self-directed learners with collaborative learning skills”, iHTs (Interactive Heritage Trails) will enable students studying Humanities, such as History, Geography and Social Studies, to make explicit connections between their classroom experiences and their immediate environment by tapping the affordability provided by mobile technologies. Using the pedagogical approach of inquiry, students will be provided with the opportunities to construct their own knowledge and understanding in specific areas and locations, where important content relevant to their current and future curriculum will be embedded in the learning experience.

There are 7 iHTs currently in the stage of development. [14]

**Propel-T**

Propel-T(Prototyping Pedagogies for Learning with Technology) is a project that challenges schools, IHLs, industry and MOE to take part in “theory-to-practice” translational projects. The aims of these Propel-T projects is to explore, articulate and prototype usable pedagogical principles and implementation strategies for both self-directed learning and collaborative learning.
MOE’s ETD (Educational Technology Division), aims to implement MOE’s ICT Masterplan for education and provides directions on the use of ICT for teaching and learning in the schools. Therefore, in collaboration with them, the Propel-T/CSCL Project is currently being piloted in selected classes in P3 and P4 levels. One such primary school is the Endeavour Primary School, which adopts the Propel-T/CSCL Project in its curriculum. In it, their teachers become a part of a knowledge-building community. They will lead the inquiry process by example, in order to motivate, and challenge the students by using free or readily available online resources such as Wikispaces Forum or Knowledge Forum to provide an online platform for students to engage in collaborative discussion. This therefore motivates students to engage in self-directed learning, and also supports SEL competencies for them. From the quantity as well as quality of the students’ responses, it can be proven that the students have interest in the subjects as well as what they have learnt. [14] [15] [16]

SEED-ICT

The SEED-ICT framework guides our teachers in developing a technology supported curriculum in an age-appropriate environment that nurtures confident and curious pupils in primary schools with strong literacy and numeracy skills. Information and Communication Technology (ICT) offers additional ways to learn and demonstrate learning.
It allows teachers and pupils to:
1. manipulate images and data;
2. visualise concepts;
3. interact with on-screen materials and receive instant feedback.

The platform that all the teachers share:

MOE SEED-ICT 2010
No further information found.

Access to the portal requires account and password. [11]

we-Learn Portal

To change the way that teachers assess learning, the we-Learn portal is designed to allow teachers in the Normal (Technical) course to create e-assignments for teaching and learning purposes, as well as school-based e-assessments that are aligned with (English Language) EL Syllabus 2010 for lower secondary English language. Teachers can create quizzes and games with the softwares available in the portal to test the listening and reading skills of the students. In 2011, 43 secondary schools have subscribed to the we-Learn portal. The portal will be rolled out to more schools in 2012. Curriculum Planning & Development Division (CPDD) provides comprehensive teacher training as well as briefing of school support staffs to ensure effective use of the portal. [12]

Details inside this portal remains unknown as account and password are required.[13]

Importance of ICT in Curriculum, Pedagogy and Assessment

This key strand of the Masterplan 3 implementation strategy is vital as school curriculum is the most direct avenue to impart ICT skills to the students. Furthermore, with ICT incorporated in the school curriculum, teachers are able to arouse the interests of students in acquiring new knowledge and skills.

The projects that support this key strand are resourceful and interactive, giving the teachers ideas and materials to enhance the students’ learning experience. While the projects advocate a borderless classroom environment with interactive learning, there are also supporting projects that guide educators in the devise of materials. Baseline ICT standards is one project that ensures the consistency and accurate delivery of ICT curriculum to the students. It is a support framework for educators to refer to when they implement ICT to their lessons.

The online portals that are created in the various projects supporting this key strand are no doubt important in providing a new dimension to learning in schools. It is important that the Ministry of Education continuously improvise on these portals and devise new platforms for ICT and school curriculum integration.

References
