MINISTRY OF
EDUCATION, TRAINING,
& EMPLOYMENT
CAYMAN ISLANDS GOVERNMENT

# Information and Communication Technology Integration Strategy

# December 2010

From the need to have empirical data informing policy decisions; to the acquisition of skills for teachers and students, Information and Communication Technology (ICT) utilisation is unavoidable if the education system is to flourish.

ICT integration in education is defined loosely as the appropriate use of relevant technologies (computers, cameras, audio devices, DVDs etc) in the delivery/presentation of instruction and assessment.

The ICT Integration Strategy, because of the nature of what is intended, is one that relies on a number of other activities and initiatives.  In many cases, these things have already been articulated and are already in progress, and in other cases, they have been planned for and are due to be implemented in the short to medium term.

It is critical to identify the desired outcome of this strategy.  All government schools will be provided ICT resources in an equitable manner and as such, the goal is to have all teachers integrating technology more effectively into their instructional practices.  As indicated before, to achieve this goal, there are a number of areas that must be addressed for teachers, ideally termed as sub-strategies:

1. Human Resource Support for ICT Integration
2. Knowledge of and Skill in the Use of Various ICT Resources
3. Effective Lesson Planning
4. Adequate Planning Time

Each of these areas will be addressed separately within this document.

## 1 Sub-Strategy 1 – Human Resource Support for ICT Integration

### 1.1 Primary Schools

Four ICT Primary Specialist Teachers (PSTs) currently provide instruction to primary school students specifically in ICT as a subject.  Students are taught the knowledge and skills specific to ICT from the ICT National Curriculum, and are assessed through National

Curriculum Levels; however, integration of ICT into various subject areas, while done partially as part of the ICT PSTs' work, is not carried out whole scale by all teachers.

It is therefore critical to ensure that time is spent working with teachers on the integration of ICT, in addition to the scheduled instruction for students in the skills and knowledge required from the ICT curriculum.

At this stage, the ICT PSTs work within the framework designed to create additional planning time for teachers. As a result, when teachers are planning, the ICT PSTs, and other specialist teachers, are actually teaching.

To ensure that capacity is developed at schools by practicing classroom teachers, it is recommended that classroom teachers be identified as ICT Integration Lead Teachers. These lead integration teachers will be chosen to ensure that someone has responsibility at the infants and juniors levels in each school. The lead integration teachers will then be able to demonstrate best practices and plan with their colleagues during their scheduled collaborative planning times. Schools can organise their schedules to allow for observations and/or modeling by the integration lead teachers. During planning time, ICT Integration Lead Teachers will ensure that the methodologies and resources being used by teachers are encompassing the myriad of ICTs available to teachers.

An advisory committee for ICT in education will be developed and part of their role will be to identify examples of best practice in the planning for ICT integration and have these examples made available to teachers to review and adapt as necessary.

Further, the ICT PSTs will serve as the liaison between the schools and the ICT Integration Specialist in the Ministry of Education, Training & Employment (METE), who will liaise with the Head of Professional Development (PD), also in the METE, on PD priorities. It will be the responsibility of the ICT Integration Specialist to coordinate and deliver necessary PD in ICT integration, which may also be tied to acquisition of skills and knowledge for teachers in ICT. This will be guided by anecdotal and empirical reports on teacher ICT use and competency, in addition to the standard requests by principals and teachers.

With the introduction of the Literacy and Numeracy Strategies, Literacy Coaches and Numeracy Lead Teachers have been identified. These individuals must be exemplars in all aspects of their subject area, including but not limited to ICT integration. As part of the implementation of these strategies, work specifically looking at ICT integration in literacy and numeracy will be undertaken. This work will take the form of workshops and planning sessions with the ICT Teaching and Learning Officer and the coaches and lead teachers.

## ACTION POINTS
### Sub-Strategy 1 – Human Resource Support for ICT Integration
**Primary Schools**

***Action Point 1: Establish the advisory committee for ICT in education and identify best practices to disseminate to teachers in the system.***

*Action Point 2: ICT Integration Lead Teachers and the ICT Integration Specialist work with teachers to plan ICT integrated units and provide opportunities for teacher development through team teaching and modeling best practice.*

*Action Point 3: METE and Department of Education Services (DES) will ensure that the needs of the system are met with respect to ICT PD based on reports from ICT PSTs on their schools.*

*Action Point 4: The ICT Integration Specialist will work with the Literacy and Numeracy Coaches to ensure aspects of ICT integration relative to their subject areas are addressed.*

**1.2     Secondary Schools**

At the secondary level there are divisions into subject specific departments.  At the high schools, ICT is taught as a subject which is assessed through National Curriculum Levels and external examinations.  The skills and knowledge required for the certification, and the certification itself from the external examination bodies, are both critical for students who wish to further their studies or enter the world of work.  It is also important however to have ICT integrated across the subject areas at secondary as well.

The departmental structure allows for a number of ICT integration strategies that are not possible at the primary level.  For example, departments have Subject Leaders who will be responsible for ICT integration within that subject area.  Their role would be, inter-alia, to coordinate the collation of various ICT resources (CDs, DVDs, websites, PowerPoint presentations, etc), correlate the various resources to subject specific attainment targets and to take a lead in planning the ICT integration for their department.

The subject leader would also work with the school's administrators, DES and METE to ensure that the necessary PD is delivered to the department as required.

**ACTION POINTS**
**Sub-Strategy 1 – Human Resource Support for ICT Integration**
**Secondary (High Schools)**

*Action Point 1: ICT Integration Specialist will work with the Subject Leaders at the secondary schools to identify opportunities for ICT integration in their subject area.*

*Action Point 2: Subject Leaders will identify, in tandem with Principals or their designates, the professional development needs for their department with respect to ICT integration.*

**1.3     Sister Islands - Cayman Brac and Little Cayman Schools**

The situation on Cayman Brac and Little Cayman with respect to the schools is unique enough to warrant a separate discussion. At the secondary level, the structure and strategy as outlined in 1.2 can be applied.  However, with regard to the primary schools, there is no ICT PST situated on the Brac or Little Cayman.  It is therefore recommended that a teacher be given a reduced timetable and a duty allowance to serve the three Cayman Brac Primary

Schools and the school on Little Cayman. This teacher will be the ICT Integration Lead Teacher for the sister islands.

Within the time provided through the reduced timetable, the teacher will provide planning support to the 13 classes in the Cayman Brac and Little Cayman on a rotational basis. This teacher will also facilitate professional development for teachers in the primary schools on the sister islands, and will liaise with the ICT Integration Specialist as necessary for assistance.

### ACTION POINTS
**Sub-Strategy 1 – Human Resource Support for ICT Integration**
**Cayman Brac and Little Cayman Schools**

*Action Point 1: Assign responsibility to a teacher with a reduced timetable to be an ICT Integration Lead Teacher for Cayman Brac and Little Cayman.*

*Action Point 2: ICT Integration Lead Teacher and the ICT Integration Specialist work with teachers to plan ICT integrated units and provide opportunities for teacher development through team teaching and modeling best practice.*

*Action Point 3: ICT Integration Lead Teacher and ICT Teaching and Learning Officer work with teachers to plan ICT integrated units and ensure ICT targets are met through team teaching and modeling.*

*Action Point 4: METE and DES will ensure that the needs of the system are met with respect to ICT PD based on reports from the ICT Integration Lead Teacher on their schools.*


2.    **Sub-Strategy 2 – Knowledge of and Skill in Various ICT Resources**

While the outcome is to have teachers integrating technology more effectively, this cannot happen if they are not aware of what technologies are available and what is possible with these technologies. It is proposed that within Learning Communities, The ICT Integration Specialist coordinates workshops on the available technologies in schools (e.g. whiteboards, digital cameras, blogging, Virtual Learning Environments (VLEs), etc). The workshops can be repeated every month and be held for an hour after school. Teachers can access these workshops whenever they wish throughout the school year.

In addition, in collaboration with the Head of Professional Development, the ICT Integration Specialist will identify certification programmes for teachers in ICT integration to allow teachers the opportunity to become certified in areas of interest relating to ICT.

Further to this, resources and information will be placed on the VLE. This will encourage teachers to use the VLE to gain access to the resources and as a result, help to make them more familiar with the VLE and how it can be used within their classroom.

**ACTION POINTS**
**Sub-Strategy 2 – Knowledge of and Skill in Various ICT Resources**

*Action Point 1: The ICT Integration Specialist coordinates a series of hour-long, after school monthly workshops on available technologies.*

*Action Point 2:  Certification courses in ICT integration will be identified and offered as professional development opportunities to teachers.*

3. **Sub-Strategy 3 – Effective Lesson Planning**

While ICT is the focus of this strategy, it is critical that this matter be seen in a broader context.  Effective planning impacts on not just the use of ICT within subject areas, but cross-curricular integration and both horizontal planning and vertical progression planning as well.  Teachers should be aware of what makes a good lesson and how to plan effectively for resources.  In many cases, a resource that is suited to review or consolidation within a lesson may be used as a tool for discovery or teaching of a concept where it might not be appropriate.

While the majority of teachers will be au fait with planning strategies, in light of the new direction relative to thematic inquiry-based planning, it is recommended that workshops related to teaching methodologies be facilitated by the Curriculum and Assessment Unit, with a focus on the literacy, numeracy and ICT integration into both vertical and horizontal thematic planning.

The Education Standards and Assessment Unit (ESAU) will evaluate through school inspections, the quality of planning and delivery of ICT integrated instruction and learning.

**ACTION POINTS**
**Sub-Strategy 3 – Effective Lesson Planning**

*Action Point 1: Conduct hour-long workshops, at least 3 per term within Learning Communities on effective lesson planning.*

*Action Point 2: Focus some of the compulsory Professional Development Days' activities on pedagogical content related to lesson planning.*

*Action Point 3:  Use the reports from ESAU as part of the planning for compulsory professional development in relation to ICT integration.*

4. **Sub-Strategy 4 – Adequate Planning Time**

There has been an increase in the planning time allocated to teachers to allow for more collaborative horizontal planning and more effective vertical planning.  This is necessary to successfully implement the thematic inquiry-based planning strategy, and in addition, with

the implementation of sub-strategy 4, the planning will be more effective focusing on the areas outlined previously, namely literacy, numeracy and ICT integration.

## ACTION POINTS
### Sub-Strategy 4 – Adequate Planning Time

***Action Point 1: Review the planning time allocated to teachers with a view to ensuring adequate time is provided to allow for a range of strategies to be incorporated into plans, including ICT integration.***

Even with these strategies implemented, it is important to note that ICT integration will be a process and will be achieved over time. The aim is to ensure that all the requisite structures and support from the METE and DES are provided to assist teachers and students.

This strategy will be reviewed and updated if necessary at the end of each academic year taking into account reports from Principals, ICT PSTs and ICT Integration Lead Teachers, feedback from teachers and students and evaluation reports from the Education Standards and Assessment Unit.

*Revised - February 2011*