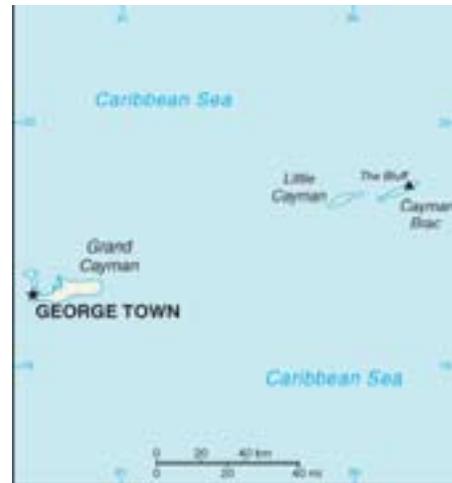# Cayman Islands

Summary

By providing financial services to over 68,000 businesses, the Cayman Islands has developed the strongest economy in the Caribbean, and enjoys one of the highest standards of living in the world based on per-capita GDP.

The Ministry of Education, Training, Employment, Youth, Sports & Culture (MOE) has launched an ambitious initiative to enhance teaching, learning, participation and administration through the use of ICT. As a result, Caymanian schools offer high levels of access to ICT to both students and teachers: almost all full-time permanent teachers have laptop computers; the student-to-computer ratio of 4:1 is among the most favorable in the world.

This extensive provision of hardware, however, has yet to yield the expected positive outcomes. Barriers including unreliable Internet connectivity, inadequate and poorly designed TPD, and uninspiring learning resources have limited teachers' efforts to integrate ICT across the curriculum.

Policy and planning

The Cayman Islands consists of three islands: Grand Cayman, Cayman Brac, and Little Cayman. In the absence of direct taxation, offshore financial services to businesses such as banks, insurance companies

Basic Data

Category	Date	Value
Population	2006 (est.)	45,436
Per capita GDP (PPP)	2004 (est.)	$43,800
Economy, composition	2006	Financial services, tourism
Literacy, total population 15 and over	1970 (est.)	98%
Net enrollment ratio, primary	—	NA
Net enrollment ratio, primary (girls)	—	NA
Net enrollment ratio, secondary	2002	86.2
Net enrollment ratio, secondary (girls)	2002	86.1
Number of primary schools	2006	10
Number of secondary schools	2006	4
Language of instruction	—	English

Sources: World Factbook, UNESCO, The Natoma Group

Relevant Policies

Policy	Status	Date	Key points
Vision 2008 – The Cayman Islands Nation Strategic Plan 1999–2008	Adopted	1999	■ Plan for national development, including education sector: ■ Computer literacy among teachers ■ ICT support for teaching and learning ■ Integration of ICT into the curriculum ■ ICT curriculum for primary and secondary students ■ ICT support for distance learning for adults ■ Community-program in libraries, community centers and other access points
A New Curriculum for schools in Cayman Islands – draft for public consultation	Draft	In progress	■ ICT curriculum ■ ICT integration ■ Wide range of technologies ■ Teachers will use ICT to enhance teaching and learning ■ All school-leavers will be literate, numerate, and computer literate

Sources: University College Cayman Islands, The Natoma Group

and mutual funds, dominate the Cayman Islands economy, with a strong contribution from the luxury-tourism sector. As a result, Caymanians enjoy the highest standard of living in the Caribbean and one of the highest in the world.

A new educational model was launched in February 2006, intended to promote student-centered learning across all levels. A Learning Communities concept was introduced as part of this program to encourage more ownership of students' performance by the community as a whole, and thus more involvement and support.

ICT in primary and secondary schools

As a result of the ITALIC program, described later in this section, both primary and secondary schools offer high levels of access to ICT to students and teachers. Main measurable outcomes appear in improved student performance in ICT examinations.

Teacher professional development

Cayman schools require teachers to have B.Ed. degrees or bachelors degrees in specific subjects plus teaching certification.

Among tertiary institutions, the International College of the Cayman Islands (ICCI) offers a B.A. in liberal studies with an interdisciplinary arts/science concentration that is intended to satisfy requirements for primary-school teachers. The curriculum for this degree, and for all degrees at ICCI, includes an "Introduction to the Computer" course; degree requirements do not address integration of ICT into teaching and learning.

ICT Resources in Schools

School type	Number	Median enrollment	ICT profile
Primary schools, government	10	Enrollment varies greatly	—
Secondary schools, government	4	Enrollment varies greatly	—
		Grand Cayman schools avg. ~850	
		Cayman Brac school enrollment is <500	

Sources: University College Cayman Islands, The Natoma Group

The ITALIC program

The principle ICT initiative in Cayman schools is the Improving Teaching and Learning in the Cayman Islands (ITALIC) program, launched in February 2002 in partnership with IBM Corporation as an outcome of the Vision 2008 plan. Key program objectives include teacher training, integration of learning software, Web-based resources, and new curricula in school-based teaching and learning, and increased (classroom-based) access to computers and the Internet.

Initial cost of ITALIC was approximately US$16 million, with these costs borne by the MOE. IBM contributed technical support during the installation process. The project involved installation of computer hardware and Internet connectivity in 29 government schools, plus TPD for approximately 300 teachers.

In addition, Riverdeep, an IBM partner and services re-seller, was selected to provide educational and administrative software and services. Flagship educational software in the ITALIC program consists of Riverdeep's Destination Reading and Destination Math series, each of which supports standards-based curricula from pre-kindergarten through middle school.

The MOE also implemented the Riverdeep Learning Village portal, intended to facilitate collaboration and communication among all education stakeholders, including school leaders, teachers, students, parents, and others. Learning Village provides teachers with planning and administrative tools, and affords teachers and students the opportunity to develop rich-media content, collaborate in small and large groups, and interact with family members. Learning Village also supports EMIS.

Evaluation of the ITALIC project completed in 2006 by Dr. Hassan Syed, President, University College Cayman Islands, found that positive outcomes include overall increases in:

- Awareness of ICT as a learning tool among teachers and students
- Internet connectivity among government schools (100 percent)
- Student access to ICT
- Teacher access to ICT

Improvements in ICT access have been impressive: The 4:1 student-to-computer ratio in Cayman schools is among the most favorable in the world. (In comparison, ratios in Canada, the USA, and the UK are 6:1, 8:1, and 9:1 respectively.) Approximately 98 percent of full-time teachers have laptop computers.

Concomitant with increased access, teaching and learning of ICT has improved, as evidenced by test results.

Adoption of ICT as tools for teaching and learning, however, as well as overall improvements in learning outcomes, have not kept pace with these improvements in infrastructure. Negative and limited outcomes are discussed in the subsequent sections.

Internet and back-office services

The software-and-services package purchased by MOE from Riverdeep delivers Destination Reading and Destination Math via portals hosted on third-party servers and accessed by students and teachers using the Internet. As a result of this configuration, ITALIC has encountered two critical barriers to successful use:

- Internet connectivity is inadequate for teacher and student access to learning resources and other services
- MOE has no access to domain and database servers, limiting control over data and learning resources and compounding technical support issues

Internet connectivity is an important component in many educational environments. The decision to implement centrally hosted versions of educational software such as Destination Reading and Destination Math, as well as the Learning Village portal, multiplies the importance of connectivity. Although all Caymanian schools now have broadband connections via ADSL, reliable and adequate Internet access was made a critical component for the success of the ITALIC project.

The independent evaluation, however, found that: "The problem of access to networks has been highlighted by the end-users as the single most important factor in discouraging the use of ICT in the schools. This unstable and precarious network performance has resulted in restricted use of ICT in the classrooms" (Executive Summary, p. 13).

Technical support was found to be a second critical issue limiting adoption of the ITALIC curriculum and resources. All support services have been contracted to CDS, an offshore private sector vendor of ICT services. On-site support in schools involves delays and limited effectiveness. Technical-support problems are compounded, however, because only CDS has access to servers delivering learning resources and recording learner results. The MOE, for this reason, is unable to positively influence server up-time or to review data on demand.

ITALIC Teacher professional development

TPD under ITALIC has also been generally unsuccessful. Obstacles included:

- Rudimentary and incomplete training content
- Lack of relevance to the Caymanian curriculum
- Failure to calibrate training to teachers' varying ICT skill levels

As a result of these challenges—and in combination with the problems posed by inadequate connectivity and technical support—adoption of the ITALIC approach by teachers has been low.

An ITALIC pilot project did offer more comprehensive TPD. However, this project included no incentives for teacher participation and, because delivery was via e-learning, foundered on the project's over reliance on network-served resources and services.

Tertiary education

The MOE operates the University College of the Cayman Islands (UCCI), as well as a law school. Private tertiary institutions include the International College of the Cayman Islands (ICCI), St. Mathews University (SMU), and the Institute for Theological and Leadership Development. In addition, UWIDEC offers courses via distance education through UCCI.

Among the five departments at UCCI is the department of Computer Science and Technology. The department offers courses in computer science and in electronics, leading to an associate degree, professional certification (Microsoft, SQLServer, etc.), and general ICT certificate programs. The department operates three up-to-date computer labs to support these programs. In addition, UCCI

makes computer workstations and a wireless LAN, both connected to the Internet, available to students in the campus library.

ICT does not play a major role at the other Caymanian tertiary institutions, although SMU does offer online services for students and faculty, as well as wireless Internet connectivity on campus.

Barriers and challenges

- **Unreliable Internet access in schools:** Although ADSL networking in schools has the potential to deliver adequate bandwidth, poor quality telephone lines and service limit Internet performance.
- **Slow response-time of out-sourced maintenance:** Along with administration of ITALIC-program servers for learning services and data management, maintenance and repairs have been out-sourced to an offshore provider. Despite relatively new hardware and software, hardware problems in schools compound problems related to unreliable Internet access and unresponsive server maintenance. (Note that as of 2007, the MOE issued RFPs for Cayman-based maintenance providers.)
- **Inadequate skills among teachers:** ITALIC TPD has to date been ineffective, in terms of guiding teachers toward integration of ICT into the curriculum and in terms of helping teachers with some level of computing skills build relevant new skills.
- **Poor linkage of educational resources to curriculum:** Although the Riverdeep software packages available to primary and middle-school teachers and students provide reasonably complete language arts and math curricula, as with many off-the-shelf products the integration with classroom practices does not appropriately complement Caymanian classroom practices.

Lessons learned

- **Network-served resources increase the importance of reliability:** The Web-based versions of Riverdeep learning and administrative resources

were adopted for the ITALIC program. Although centrally served resources may require less support and may be more easily upgraded and modified, teacher and student access is completely dependent on reliable Internet access. Unreliable Internet connectivity has contributed to low levels of usage of these resources.

- **High levels of ICT access do not alone lead to enhanced teaching and learning:** Although teachers and students both enjoy high levels of access to computers and to educational software, impact on teaching practices and learning outcomes have yet to be observed. While hardware and network access *is* critical, areas such as curriculum reform, appropriate learning resources, and TPD must be effectively planned and implemented to achieve improvement across the curriculum.