

## Summary

Although use of ICT among the public and within the government is not high, the MOE is an ICT leader on the island. All secondary schools have computer labs with Internet connections. The MOE has worked with OERU to draft and refine ICT policy documents and to procure and implement EMIS. The resulting policy (not adopted) emphasizes the use of ICT to enhance learning in all curriculum areas. Computer use in primary schools, however, remains low, while focus at the secondary level is on building ICT skills.



## Introduction

An end to preferential trade status in the EU in the 1990s led to a significant decrease in banana exports in the 1990s. St. Lucia has strived with some success to offset these reductions by increas-

ing activity in its financial-services and tourism sectors. By several measures, the country and government are achieving a high quality of life relative to economic output: In 2003 St. Lucia was ranked 71st in the UNDP HDI report, 17 places above its rank in terms of per-capita GDP; in the

### Basic Data

Category	Date	Value
Population	2006	168,458
Per capita GDP (PPP)	2005	\$4,800
Economy, composition	1996	Financial services, tourism, manufacturing, agriculture
Literacy, total population 15 and over	2001	90.1
Literacy rate (women)		90.6
Gross enrollment ratio, primary	2002/3	104.3
Gross enrollment ratio, primary (girls)	2002/3	103.8
Gross enrollment ratio, secondary	2002/3	89.8
Gross enrollment ratio, secondary (girls)	2002/3	89.7
Number of primary schools	2006	86
Number of secondary schools	18	2006
Language of instruction	—	English

Sources: World Factbook, UNESCO, MOE

## Relevant Policies

Document	Status	Date	Key points and objectives
Integration of ICT in education: Proposed policies	Draft, adoption in process (re-working of OERU model, facilitated by consultant Maria Plummer)	2002	<ul style="list-style-type: none"> <li>■ Harmonize activities, approaches and standards in the use of ICT in education</li> <li>■ Encourage all education stakeholders to use ICT meaningfully</li> <li>■ Ensure equitable access to ICT</li> <li>■ Increase availability of ongoing TPD</li> <li>■ Ensure frequent upgrading of ICT tools</li> </ul>
Draft policy for the integration of ICT in the education system	Draft, not considered for adoption (augmentation of the OERU model policy, facilitated by Mark Ernest of OERU)	2002	<ul style="list-style-type: none"> <li>■ Objectives similar to the draft in the process of adoption, however in a different sequence</li> </ul>

Source: MOE

same report St. Lucia is ranked 40<sup>th</sup> in school enrollment, again out-performing the economy. Unemployment, however, remains high (as is normal in the region).

Education in St. Lucia is funded by loans and other assistance from the World Bank, CDB, DFID, and UNESCO. Volunteers from the Japanese Overseas Cooperation Volunteers have served as IT specialists providing significant assistance to the MOE.

approval. The draft policy clearly and consistently supports ICT use in schools in order to enhance teaching and learning across the curriculum, and to enable comprehensive reform linking ICT integration to changes in assessment, classroom practice, and learning resources.

(In the process of the adaptation, two St. Lucia policy documents were developed, including one that more closely reflects the OERU model.)

## Policy and planning

The Ministry of Education (MOE) of the Government of St. Lucia has been an active partner of the OERU in the areas of ICT-policy development and EMIS implementation. A key participant in OERU's development of a model ICT policy, in 2002 the St. Lucia MOE began a process of adaptation and augmentation of the model document, leading to the development of the draft *Integration of ICT: Proposed policies*.

The draft policy was completed in 2002, and is as of 2007 being adapted to present to the cabinet for

## ICT in schools

Some primary and all secondary schools in St. Lucia have received computer labs as donations from C & W.

Maintenance presents problems in both primary and secondary schools. Two private sector companies have been contracted to maintain school computers. In addition, three technicians in the MOE IT unit are also charged with maintaining school computers. Challenges to maintenance include lack of on-site visits by the MOE technicians, compounded by aging hardware. When

## ICT Resources in Schools

School type	Number	Median enrollment	ICT profile
Primary schools, government	86	~315	<ul style="list-style-type: none"> <li>■ 20 schools have labs of 10 computers</li> <li>■ 512 kbps DSL</li> </ul>
Secondary schools, government	18	—	<ul style="list-style-type: none"> <li>■ All secondary schools have labs of roughly 20 computers</li> <li>■ EDUNET fiber-based ISDN network</li> </ul>

Source: MOE

failures occur, computers must be sent to the MOE IT unit for repair.

As a result of C & W support, some primary and all secondary schools access the Internet through the MOE's EDUNET server. Original primary-school dial-up connections to EDUNET have been replaced by DSL; Secondary schools connect to EDUNET via fiber-based ISDN or T1.

Overall, although the MOE in collaboration with C & W has introduced ICT into primary and secondary schools, the effort remains on the level of an introduction. Limited student access to computers in combination with lack of support for TPD and curriculum development ensures that focus especially in secondary schools remains on the development of basic ICT skills.

### Primary schools

The 20 primary schools (out of 86) with labs are connected to the Internet at 512 Kbps. In ten of these schools, computers are three or more years old, and present maintenance challenges. In these schools, it has been estimated that 50 to 75 percent of computers are functional. Ten additional primary schools have received computers more recently, under a poverty-reduction program; a higher proportion of computers in these schools are functioning at present.

(Schools received computers for poverty reduction as a result of applications made to the MOE.)

In 2005, the MOE entered into an agreement with Riverdeep Interactive Learning to adopt the Destination Math software at the primary and secondary levels.

All primary schools have computers for administrative and/or teacher use. In roughly 75 schools, these computers have Internet access; the remaining schools lack telephone lines.

Internet connection rates are adequate (512 kbps via DSL); connectivity is provided at a discounted rate by C & W. However, telephone-line quality is poor, and frequently limits Internet access. Secondary schools

All 18 government secondary schools have computer labs of roughly 20 computers, as part of the C & W donation.

Computer-lab timetables are taken up with elective courses preparing students for the CXC ICT exam. Fifteen to 20 students per class are selected for the IT course based on prior scores in math exams.

A new secondary school, Ciceron, has been developed as a flagship ICT school. In addition to vocational programs, including IT, the Ciceron school will make use of CAI to support its curricula and will offer ICDL and Microsoft certification.

## Teacher professional development

Pre-service teacher education takes place under the auspices of the SALCC, which includes a UWI center that offers the B.Ed. degree in primary and secondary education. SALCC features three computer labs for general use, plus two additional labs for technical studies such as CAD. Overall, teacher education lags staffing needs substantially,

Teacher Professional Development Programs				
TPD program type	Target population	Objectives	Scale	Barriers
Sir Arthur Lewis Community College (SALCC)	Pre-service teaching candidates	<ul style="list-style-type: none"> <li>■ Prepare candidates for profession of teaching</li> <li>■ All SALCC students have access to computer labs, Internet connections, and ICT training</li> </ul>	—	<ul style="list-style-type: none"> <li>■ Limited enrollment</li> </ul>
MOE quarterly workshops	In-service teachers	<ul style="list-style-type: none"> <li>■ Build basic ICT skills</li> <li>■ Build skills in integrating ICT into the curriculum</li> </ul>	—	<ul style="list-style-type: none"> <li>■ Interest levels are low</li> </ul>

Source: MOE

with a majority of schools having faculties with less than 80 percent of teachers trained (as of the 1999–2000 academic year).

In-service teachers may elect to participate in quarterly workshops offered by MOE personnel, addressing basic computing skills, and integration of ICT into the curriculum. These workshops are offered in Castries.

Under an arrangement between the MOE and C&W, teachers are able to purchase computers for home use at reduced prices; they receive six months of Internet connectivity free of charge.

Staffing in schools in relation to ICT remains a challenge. Retention of trained IT teachers is lower than retention of faculty in general; at the same time, many IT teachers are uncertified and lack necessary skills.

### *Tertiary education*

In 1985, SALCC was created via the merger of three existing higher-education institutions. Named after the Nobel prizewinning economist from St. Lucia,<sup>12</sup> SALCC offers associate programs in technical and management studies, agriculture, and health sciences. The program in technical and management studies offers degrees in computer and network maintenance.

The teacher-education program, as mentioned, offers the B.Ed. degree in primary or secondary education through UWI.

The 1,400 students at the campus have access to three computer labs sharing a 1.5 mbps DSL connection to the Internet. Additional labs are available to students requiring CAD capabilities. All students have SALCC email addresses,

Through its Continuing Studies program, SALCC offers a number of evening courses in office-productivity applications and computer maintenance.

### *Nonformal, distance, and open education*

As mentioned, ten St. Lucian primary schools have applied for and received computer labs and Internet connections to support poverty reduction. Students use the labs during the school day; community

members have access to the facilities at night and on weekends.

Training in basic computer skills is provided. Levels of demand among communities are generally high.

The Government of St. Lucia also operates the National Skills Development Center, which helps high- and low-skilled school-leavers and unemployed adults (ages 16 to 65) acquire job skills and information about job opportunities. The general programs of the NSDC include computer literacy. Technical/vocational courses include: electrical installation, dressmaking and fashion design, drapery, floral arranging, cake decorating, catering, and IT.

### *EMIS and MOE ICT capacity*

After several years of experimentation and unforeseen delay, the MOE is in the process of implementing an EMIS.

In 1999 and 2000, St. Lucia served as the pilot site for the OERU effort to develop, test, and disseminate an EMIS that would be “harmonized” for use in all OECS countries. Problems arose both with the software and with the implementation plan. Société GRICS, a non-profit organization run by the Quebec school system, developed the GPI school-management software. Customization was incomplete at the time of installation: drop-down help instructions, for example, remained in French. In addition, school staffs were asked to attend training and to enter and maintain all relevant records, but were not released from other responsibilities. Participation did not reach high levels. Additional problems arose related to network infrastructure and compatibility with in-school server software. In part as a result of these challenges, the OERU EMIS project stalled.

The MOE has pilot tested an EMIS product independently. School administration software developed by Maplewood Computing Ltd., of Vancouver, BC, Canada, was selected for pilot testing in 10 schools.

(For additional information, see the section, “EMIS implementation in the Caribbean.”)

<sup>12</sup> St. Lucia was also the birthplace of the 1992 Nobel laureate in literature, Derek Walcott. Sir Arthur Lewis was awarded the prize in economics in 1979 for his studies of trade and labor productivity among developed and developing nations.

## Barriers and challenges

- **Minimal student access to computer:** In secondary schools, use is generally restricted to the students who qualify for the IT elective based on their math scores. Timetabling for IT classes occupies all or almost all of the available lab hours, barring teachers—even those who have received ICT-integration training—from integrating computers into students' study of other subjects.
- **Teachers are unenthusiastic:** Teachers are not engaged in the process of using ICT. TPD is available through the MOE, but teachers remain resistant.
- **Maintenance is inadequate:** Maintenance is neither timely nor convenient, despite the fact that the MOE has engaged the services of two private sector computer-maintenance firms and has mandated that its IT unit also support school computers. Repairs are made *ad hoc* and off-site; there are no regular, on-site maintenance activities.
- **Lack of understanding ICT integration among MOE personnel:** For many MOE personnel, ICT in schools should support basic-computing courses and IT electives. When integration is considered, solutions such as subject-specific software (i.e., Riverdeep's Destination Math) or CAI-based products are considered, while the potential of productivity software, collaboration tools, and the World Wide Web is neglected.
- **Inadequate knowledge of trends in ICT in education:** For St. Lucia, with a systemwide commitment to ICT use in schools, trends in hardware, networking, and learning-resource development could yield significant returns, yet these trends are largely ignored. Thin-client networks and open-source software, for example, could help the MOE address limitations on computer access by increasing the amount of computing power and the number of workstations available at a given price.

*A portion of the research for this report was conducted by Dr. Clarisse Lima.*