

Relevant Policies

Document	Status	Date	Key points
Strategic Plan: 2006–2007 to 2010–2011	Adopted	2007	<ul style="list-style-type: none"> ■ Develop technology standards and measure student proficiency ■ Evaluate integration of technology in instruction ■ Improve student achievement by integrating technology within disciplines
U.S. Virgin Islands Department of Education Two-Year Technology Plan	Adopted	2004 (extended through 2006–2007)	<ul style="list-style-type: none"> ■ Two-year plan funded by USED
Internet Use Policy	Adopted	2004	<ul style="list-style-type: none"> ■ Protect students from inappropriate content ■ Seek parents' permission for use of student information and school-related works ■ Provide USED email accounts and websites to employees
U.S. Virgin Islands Department of Education Information Technology Policy	Adopted	2000	<ul style="list-style-type: none"> ■ Outlines privacy, personal use, government access, security and other aspects of ICT use within the DOE

Source: VIDE

of ICT integration that is outlined in policy and planning documents. Even at these moderate levels of ICT implementation, lack of technical-support personnel limits both the overall impact of ICT and the capacity of the school system to increase its ICT use.

Tourism contributes 80 percent of GDP to the economy of the US Virgin Islands, which has been a territory of the United States since 1917. The manufacturing sector, which includes the world's largest oil refinery, contributes an additional 19 percent.

ICT-related planning and implementation in education are strongly influenced by the United States Department of Education (USED), and by the Federal Communication Commission (FCC). ICT in schools is relatively well realized, with systemwide email accounts for teachers, websites for schools, Web support for parents and students, and monthly TPD for IT teachers. All high schools have computer labs and broadband Internet access. All primary and secondary schools have infrastructure for VTC, and most primary schools have computer labs.

Technology integration remains challenging, as does technical support and maintenance. Equity issues are also significant, with Central High School on St. Croix having seven (or possibly eight) computer labs, while other schools do not have equivalent levels of infrastructure.

Funding for ICT in education is received from the Government of the United States in response to the Virgin Islands Department of Education's (VIDE's) two-year technology plans.

Policy and planning

Planning processes in the Virgin Islands are well developed, relative to other countries in the region, in part due to requirements and support derived from the USED. The recently adopted five-year strategic plan is not solely concerned with ICT. Nonetheless, it outlines positions on ICT use, provision of appropriate facilities and resources, and integration of technology within all academic disciplines.

The FCC provides 90 percent of education-technology funding, with the remaining 10 percent provided by the territorial government. Funding is awarded in response to two-year education-technology plans, developed in consultation with teachers, that request additional support for ICT in classrooms, such as wireless networking to support laptops and computers on carts. Because the most recent two-year plan was funded at a level much lower than requested—and because the plan proposes initiatives that address both demand and need in schools—it has been extended for two more years. Additional funding has been received for its implementation.

ICT Resources in Schools

School type	Number	Median enrollment	ICT profile
Primary schools	24	—	<ul style="list-style-type: none"> ■ All schools have at least one computer (admin) ■ Most schools have computer labs with broadband Internet connections
Junior secondary schools	5	—	<ul style="list-style-type: none"> ■ Most schools have computer labs with broadband Internet connections
Senior secondary schools	5	—	<ul style="list-style-type: none"> ■ Most schools have computer labs and broadband Internet connections ■ Several schools have more than one lab (up to 8 labs at Central H.S.) ■ Computers are to be provided in all classrooms in the future ■ All schools have videoconferencing facilities

Source: VIDE

ICT in primary and secondary schools

ICT implementation in the Virgin Islands remains challenging, however planning and procurement strongly emphasize the implementation of technology to support learning across the curriculum rather than the use PC workstations to gain IT skills. Explorations of broader uses of ICT have resulted in special projects intended to increase the benefits of technology for teachers, students, and families.

The VIDE includes an Office of Instructional Technology. This office provides trouble-shooting, maintenance, and consultation to schools and school districts, and manages ICT systems that include EMIS, VTC, and educational networks and network services. The office also provides TPD and interacts monthly with all school-based IT coordinators. Staffing is currently an issue.

In contrast to most ICT programs in Caribbean school systems, a separate ICT curriculum has not been developed. (Virgin Islands students do not take the CXC exams.) The VIDE has instead made use of the ISTE National Education Technology Standards (NETS) as a framework for development of curricula that integrate ICT more comprehensively and effectively.

Additional initiatives in secondary schools have focused on using ICT to enhance teaching, learning, and management. These initiatives include: introduction of digital whiteboards, establishment of a telephone homework hotline (in 30 percent of

schools) that enables family members to keep up to date about students' homework, and the use of Discovery Education's Digital Curriculum—an on-demand video library of standards-based content supported by lesson plans, activities, and assessments.

Digital white boards are large flat-screen touch-screen monitors that enable teachers and students to write, diagram, move elements, and record their work. Digital white boards can also display computer or Internet-based video and other dynamic content.

Secondary schools

All junior and senior secondary schools in the Virgin Islands have computer labs and broadband Internet connections (45 Mbps. avg.). Central High School on St. Croix, with approximately 1,300 students, has at least seven computer labs,¹³ each supporting learning in a separate curriculum subject.

Homework hotline and help desk

The VIDE Homework Hotline is designed to increase the connections of parents and family members to schools, to increase their involvement in students' schoolwork, and to assist students in remaining up to date with their homework assignments. Teachers have access to telephones (in teachers lounges, school offices, and many classrooms) that enable them to leave assignment and other information in voice-mail boxes, receive messages from parents, and respond to messages when necessary. (For more information about the

¹³ Respondents have indicated that Central High School may have as many as eight labs.

Teacher Professional Development Programs

TPD program type	Target population	Objectives	Scale	Barriers
Initiatives targeting specific technologies	In-service teachers	<ul style="list-style-type: none"> Introduce teachers to tools such as digital whiteboard, digital curriculum video, etc. 	<ul style="list-style-type: none"> Unknown 	<ul style="list-style-type: none"> Unknown
VIDE TPD program	In-service teachers	<ul style="list-style-type: none"> Provide relevant monthly TPD to in-service teachers addressing a variety of topics 	<ul style="list-style-type: none"> Voluntary in nature, the scale is unknown 	<ul style="list-style-type: none"> The distributed archipelagic geography of the Virgin Islands limits participation

Source: VIDE

VIDE's VOIP-based telephone network, please see the section, "Project profile: VOIP telephone network, US Virgin Islands.")

The Division of Libraries, Archives, and Museums maintains an Internet-based homework helpdesk. Students can send Web mail messages to reference librarians who assist in identifying resources and in other ways.

Teacher professional development

Virgin Islands teachers are required to hold bachelors degrees and to be certified by the Virgin Islands Board of Education. UVI Division of Education offers a B.Ed. in Elementary Education, an M.A. in Education and a Secondary Teacher Preparation program that enables students in other disciplines to prepare for teacher-certification exams.

In addition to the Praxis certification exam and an English-proficiency exam, applicants for certification are required to pass a Computer Literacy Exam (CLE). In many schools, teachers are required to use email to remain up to date on faculty-wide or systemwide communications.

Students do not receive ICT training as part of the Division of Education curriculum, but they may elect to take ICT-related courses from the UVI Business Division.

UVI does not offer ICT-specific in-service TPD. However, in-service teachers may enroll in courses within the Division of Education that address use of

ICT in teaching and learning (e.g., instructional design and technology).

Tertiary education

UVI makes use of ICT to support teacher and student access to information for both research and instructional purposes.

Together the St. Croix and St. Thomas campuses have approximately 10 computer labs with Internet connections available for use by students. Roughly 50 e-learning courses are available via the UVI Blackboard Learning System. Included in the online curriculum is a CLE-preparatory course. The library on the St. Thomas includes a media center housing audio-visual resources and hardware. The university also maintains a well-utilized telephone-accessible help desk for ICT-related problems.

In addition, 8 to 12 facilities on the two campuses offer VTC capabilities. These are used to enable DE instruction between the two campuses, and to link UVI students to courses at other institutions.

The UVI Business Division offers a B.A. degree with a variety of concentrations, including Computer Information Systems, as well as an A.A. degree in Computer Information Systems. The Business Division computer lab is designed for the use of students enrolled in Business Division ICT classes

Nonformal, distance, and open education

The Virgin Islands is a recipient of funding from the U.S. Libraries program of the Bill and Melinda Gates Foundation. The program funds acquisition of computers and Internet hardware for public libraries to enable them to provide ICT access and

training to patrons free of charge. There are approximately five libraries on the island of St. Croix, two on St. Thomas, and one on St. John.

Several schools also regularly open computers labs to family members and members of the PTA, enabling them to use computers and the Internet. IT teachers and, on occasion, students may offer training as well.

EMIS and use of ICT by the DOE

As with many school districts and states in the USA, the Virgin Islands has implemented EMIS using the Pearson School Systems SASI software. This software has been in place since at least the late 1990s. Although implementation is far from perfect in schools or throughout the system, the SASI software is mature and EMIS in the Virgin Islands generates accurate information. More recently, the Government of the Virgin Islands has begun to implement a vertical Enterprise Resource Planning (ERP) system in all departments. To increase accountability and efficiency and to improve overall management, the system links local planning and expenditures, such as school-level budgeting, procurement and allocations to departmental and government-wide DBMS. The project is currently in its first phase.

Overall, the technical capacity within the VIDE is relatively high. It is, in addition, worthwhile to note especially in relation to the struggles with EMIS within the region that the Virgin Islands receives technical assistance and support from the USED and others.

Barriers and challenges

- **Technical support:** In this regard the experience in the US Virgin Islands broadly reflects that of the region. The challenges presented by the secondary-school ICT installations, however, are more substantial with regard to the diverse range of tools supported: schools have multiple computer labs, several digital whiteboards, and VTC facilities; the USED also maintains a Web mail service for teachers and students, Web hosting of school sites, and other services. As of 2007, one staff person is responsible for these installations and services for the island of St. Thomas.
- **Island topography:** As in many countries in the region, the education system is challenged in part by the fact that the country is an archipelago. In the case of the Virgin Islands, each island maintains a separate school district. In the VIDE's relatively decentralized system, schools and school districts each have their own budgets, increasing the requirements for coordination of procurement, technical support, and other services. The education system overall is also challenged by strongly different conditions for rural and urban schools. In part, of course, ICT represents a means of overcoming such challenges. But variations in school catchments and enrollments, the relative wealth of communities, and other factors have the potential to re-cast ICT as an additional area of challenge in relation to educational equity.
- **TPD and support technology integration:** At present, the VIDE provides TPD centrally, with the teacher traveling to attend pull-out workshops. Although adequate in some cases for the development or reinforcement of technology skills, this structure provides limited support for efforts to integrate ICT into classroom curricula. Teachers return to their schools, attempt projects taking advantage of ICT, and encounter obstacles that cause delay, diminish achievement, and reduce enthusiasm. Better models could include changing the roles of IT teachers to include more time working with classroom teachers in preparation and implementation, or developing TPD "intensives" in which expert support personnel work on-site with teachers over a specified period of time to introduce ICT-integration methods.