Chapter 4.7
ICT in Medical Education in Trinidad and Tobago

Marilyn Lewis
The University of the West Indies, Trinidad and Tobago

INTRODUCTION AND BACKGROUND

Information and communication technology (ICT) allows users to access information without taking geographic position into account. These users are also unconstrained by time, volume, or format of the information. ICT applications have enormous potential as a tool for aiding development in countries such as Trinidad and Tobago. Telemedicine, which can provide medical services to persons in isolated places, in emergencies, to the homebound, or the physically challenged, is but one example. Mansell and Wehn de Montalvo (1998) noted that "ICT applications facilitate telemedicine" (p. 85), and that "economic development can be fostered by tele-working and tele-services in some developing countries" (p. 83).

The twin-island nation of Trinidad and Tobago lies at the southern end of the Caribbean chain of islands, approximately seven miles off the north-east coast of Venezuela. The area covers 1,864 square miles (5,128 sq. km.), with a population of approximately 1.5 million. The economy of this small nation state is based mainly on petroleum and gas-based industries, but there is a growing service sector. PAHO figures (2002a, b) show a highly literate population with an overall adult literacy rate of 98.5% (males at 99.1% and females at 97.9%).

Transshipment and telecommunications facilities contribute to this country's position as the most industrialized in the Caribbean. The country's technical capacity and access to information have grown enormously in recent years. Telecommunication tools extend to the vast majority of the population. Per capita GDP stands at US$8,500.

There is a shortage of medical staff in general, with the ratio of doctors to inhabitants at 7.5 per 10,000. Shortages in primary health care are more acute than in other areas and have resulted in the employment of retired nurses and the recruitment of professional staff from other countries, particularly from Nigeria, India, and more recently, from Cuba. Trinidad and Tobago therefore stands poised to benefit from further development by fully embracing ICT, especially in the areas of education and medicine.

MEDICAL EDUCATION IN TRINIDAD AND TOBAGO

Medical education in Trinidad and Tobago engenders self-directed, lifelong learning through the use of the problem-based learning (PBL) method of teaching. The Faculty of Medical Sciences (FMS) of the University of the West Indies opened in St. Augustine, Trinidad and Tobago, in 1989, and has utilized PBL from its inception. Students' relative independence has been noted (Donner & Bickley, 1993) in students following PBL programs. Donner and Bickley noted that "they differ markedly from those following traditional medical programmes… [becoming] more skilled at an eclectic style of learning" (p. 297). These students show particular personal characteristics that encourage them to take a proactive role in their own learning, making them lifelong learners.

Research has also shown that PBL students make maximum use of library resources and that librarians taught the use of technology as a means of accessing, organizing, and managing information (Marshall, 1993). Library instruction is therefore a required part of the curriculum. Librarians become not just providers of books and other materials but also instructors in the use of modern technology. The library, therefore, prepares medical students for wider use of other applications and technologies to support their future information needs. This has implications for how these students will operate when faced with adverse conditions such as rural health offices and hospitals with limited resources, and for development in the community generally; these students in their homes, in their practices, and in the wider community will generate a multiplier effect.

INSTRUCTIONS IN THE USE OF MODERN TECHNOLOGIES IN THE MSL

From its inception, the Medical Sciences Library (MSL) has embarked on a program of information literacy for undergraduates and other categories of users. From as early as 1993, topics such as "MEDLINE: basic and advanced"; "International Pharmaceutical Abstracts (IPA)"; "MedCarib—health literature for the Caribbean"; "ProCite"; "Introduction to Computers"; and later, "EPI Info"; "Introduction to the Internet" and "PubMed" have been taught. In facilitating this training, the library equips its clientele with survival skills for the 21st century.

The Trinidad and Tobago Ministry of Health also recognized a need for retraining, because new demands were being placed on practitioners by health care transition, health care reforms, increased public and patient expectations, and advances in medical sciences and technology. The Ministry found that medical practitioners required additional skills. This was part of the rationale for the introduction in 2000 of a new postgraduate diploma in Primary Care and Family Medicine being offered by dual mode, face-to face initially, and thereafter, through distance education.

The library component of this course focused on skills such as "Locating and evaluating health information"; "Skills base for managing health information resources"; "Innovations in health information practice"; "Effective search and retrieval principles"; "MEDLINE on the Internet"; "Finding biomedical information on the Internet"; "Evaluating information resources"; and "Managing bibliographic references". Assessment tasks included:

- Joining and leaving an electronic discussion group