The State of Eritrea

Ministry of Education

National Feasibility Study on ICT in Education in Eritrea

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258. The BC program overall seems an important step for schools. Generally, all students will be exposed to the computers, and the presence of the computers will help to plant the seed for ICT in schools. However, many librarians seemed reluctant to begin allowing students to use the catalog before all the books in the library were in the database. Additional training was being offered in the Summer, 2005, and it would be useful to provide student phase-in strategies for librarians.

CTS Network Pilot

259. CTS is a local, private ISP. In 1998/99, CTS entered into a consulting agreement with the MoE to develop a country-wide electronic network mechanism to support Statistics & EMIS division's collection of education data from the zobas. The collection process had traditionally been very inefficient and new technologies provided hope to build much-needed capacity in this area.

260. The vision was to link all MoE zoba offices by local dial-up service to transfer statistics data to the central office. The consultant developed and implemented a plan to install and establish the network over existing telecommunications infrastructure, and develop related data organization and upload procedures.

261. The project worked for only a short while. The consultant did not stay within the contract schedule, and after series of prolonged the MoE canceled the contract and the pilot was not continued.

262. A number of important lessons can be learned from this failed pilot. When technical interventions are planned and implemented by a third party, particularly when it concerns capacity development, it will be important for the MoE to include a training clause in the agreement. This will allow for MoE staff to learn from the consultant, with the intention of carrying on with the work once the consultant's agreement is finished. Furthermore, general sustainability plan for pilot, especially those with technical support and maintenance considerations, should be included in pilot plans. Included in the pilot should be a framework for imparting a systematic understanding of the pilot, both conceptually and technically.

FAIR

263. FAIR is a Norwegian NGO aiding developing countries by supplying computer networks and training. FAIR distributes refurbished computers to many organizations, including schools. Currently, FAIR is currently working in Zoba Northern Red Sea, installing network computer labs of 50 computers in 4 secondary schools, and 3 middle secondary schools. FAIR provides teacher training to maintain the software and hardware of the labs.

264. FAIR installs a unique system that will be an important model for all computer labs in Eritrea. FAIR provides schools with new servers that facilitate all 50 computers to boot two operating systems (called dual booting): Microsoft and Linux. The dual boot system provides the opportunity for students and teachers to become familiar with and use open source software and still have the familiar Microsoft software available. Furthermore, the FAIR system uses a "thin client" system when booting Linux. Thin client systems run all applications off the server rather than each workstation. The thin client system uses less electricity as the workstations are no longer processing data.

265. By the start of the 2005/2006 school year, all 7 FAIR computer labs will be installed, and all teachers trained to administer the lab. This program will be very important to monitor and the MoE would very much benefit from the experiences in these schools.

World Links

266. The World Links program is a Washington, DC-based NGO specializing in ICT for teaching and learning. World Links provides a variety of ICT related solutions and training tailored to individual country needs. The core of World Links lies in its teacher professional development program that focuses on "telecollaboration" between schools locally, regionally, and around the world. World Links has programs in over 20 countries around the world, and maintains an open online community of educators that share ideas, lessons, and experiences with the community.

267. World Links began its program in Eritrea in 2003. World Links has currently been training 100 teachers and 50 directors on basic ICT skills, applications, and using the Internet for teaching and learning. World Links, working closely with the MoE, has secured 6 networked computer labs of refurbished computers. These labs are currently being installed in 6 pilot secondary schools in 5 of the 6 zobas. All labs should be up and running by the beginning of the 2005/2006 school year.

268. World Links is a very empowering program for teachers and students. The focus is on getting students to use the technology to support their learning, particularly through using Internet tools. World Links encouraged innovation, especially on the school-community level to develop strategies to support and maintain the computers, and find ways for cost recovery locally. World Links promotes the school-based telecenter model, where schools offer computer and Internet access to the local community for a small fee. This model has helped to sustain computer labs, and pay for Internet connections, in many African countries, including Zimbabwe, Uganda, and Senegal. The MoE should follow this pilot closely, as the best practices and lessons learned will be important for expansion of ICT in the country.

269. In addition to the 126 computers for the 6 pilot schools, World Links has also secured 384 additional refurbished computers for Eritrea. These computers will be important support to facilitate a more immediate deployment of ICT in schools as ESDP procures and installs labs later in the 2005/2006 school year.

Exemplary Innovations & Best Practices

270. The study team observed a number of innovations during site visits that illustrate the resourcefulness of the school community to support and enhance the school. The follow cases add to the collective knowledge of strategies for ICT in education for Eritrea. Similar exemplary practices at other schools could also be explored that the feasibility team has not visited.