

Background Note

Human Capacity Building in the Small Islands Developing States (SIDS) of the Pacific Region

1.0 Overview and Context

The importance of Human Capacity Building in Information and Communications Technologies (ICTs) and its relationship to sustainable economic development has been recognized by Pacific leaders and development/donor agencies since the early 2000's. Surveys of members of the Pacific Islands Forum (PIF) have previously identified Human Resource Development in ICTs and their use in education as strategic priorities. Further confirming this, Ministers at the 2006 Wellington ICT Ministerial Meeting declared "that information and communication technologies (ICTs), while not an end in themselves, have a key role as a basis for economic development, while also promoting and enhancing social cohesion, cultural enrichment and environmental conservation". Similarly, the World Bank¹ has emphasized that "educators and policymakers agree that ICTs are of paramount importance to the future of education" and that "ICT in education initiatives ... are likely to successfully contribute to meeting Millennium Development Goals."

However, given the unique geography and demographics of the region, capacity building has proved to be a major challenge for Pacific Island Countries. The sub-regions of Melanesia, Micronesia and Polynesia together represent around 10 million people living on islands spread over millions of square kilometers. Even amongst the 14 Small Islands Developing States (SIDS), there are large discrepancies in terms of population, literacy, GDP per capita, and access to ICTs. Combined with a lack of tertiary educational facilities, the high costs of recruiting and retaining qualified professionals, human capacity building and talent retention continue to be a significant barrier to regional development. As a recent 2008 Asian Development Bank study² noted:

"Capacity development in the Pacific has proved to be a complex, long-term process, requiring considerable resources and continuing technical assistance. This has led to ongoing debate in the region about the most effective way of supporting capacity development. The migration of skilled and professional staff has exacerbated capacity shortages. And many public institutions have suffered from serious capacity constraints, including lack of key professional staff."

2.0 Back to Basics: What is ICT Literacy?

What is ICT literacy? In 2001, the Educational Testing Service (ETS)³ convened an international panel comprised of academics, development specialists, and telecommunications experts representing the governmental and private sectors "to study the growing importance of existing and emerging ICTs and their relationship to literacy." In its report released in 2003, *Transformation: A Framework for ICT Literacy*⁴, they defined ICT literacy as the ability to use "digital technology, communications tools, and/or networks to access, manage, integrate, evaluate, and create information in order to function in a knowledge society." An analogous concept was outlined by world leaders at the World Summit on the Information Society in its Geneva Declaration of Principles (2003): "Each person should have the opportunity to acquire the necessary skills and knowledge in order to understand, participate actively in, and benefit fully from, the Information Society and the knowledge economy."⁵

In general, ICT literacy should be seen as a continuum of skills and abilities. A recent study⁶ from UNESCO (2008) on promoting ICT literacy in the Asia Pacific region described such a continuum:

¹ See *Strategy Framework for Promoting ICT Literacy in the Asia Pacific Region*, UNESCO, 2008

² *The Role of USPNet in Capacity Development in the South Pacific Region*, Asia Development Bank, 2008

³ A nonprofit organization with a mission of advancing the quality and equity in education for all people worldwide.

⁴ <http://www.ets.org/icliteracy/digital1.html>. Cited in Footnote 1 above.

⁵ WSIS Geneva Declaration of Principles, Geneva, 2003 at <http://www.itu.int/wsis/docs/geneva/official/dop.html>

⁶ See Footnote 1 above.

- A *knowledge dimension* characterized by a user's *awareness* of ICTs and *appreciation* of the relevance of ICTs in both her/his personal and professional life. It is familiarity with the technologies and understanding how these are actually or can be potentially beneficial to his or her own and other people's lives.
- A *skills dimension* resulting from the use of or experience with technologies. The abilities "to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in networks via the Internet"⁷ are hallmarks of an ICT-literate individual.
- Reflecting a higher level of ICT literacy than either the *knowledge* or *skills* dimensions above, the *attitude dimension* represents a person's *critical assessment* of his or her use of ICTs for information and knowledge. In a recursive manner, the continued and ongoing use of ICTs increases and deepens the user's *critical reading of information and knowledge* that is accessed, managed, integrated, created, and communicated through ICTs.

3.0 Lessons from ICT Capacity Building in the Pacific

A general approach to building ICT literacy for Pacific Island Countries would include mainstreaming the use of ICTs in curricula of either public or private education institutions and providing training to existing workforces who no longer attend schooling. Specific activities could include information exchange on ICT-related curricula and shared educational materials, development of pan-regional educational governance and accreditation, and developing qualified instructors and additional educational facilities to meet the needs of the region. These can be facilitated through direct technical assistance from national governments, regional and international development agencies, with a particular emphasis on "train the trainers" initiatives to improve longer term sustainability.

With regard to educational institutions, although there are a number of institutions promoting use of ICTs in secondary schools, related tertiary level education is still limited⁸. Some excellent experiences in adopting a regional approach to gain critical mass as well as leverage the use of ICTs to overcome the remoteness of Pacific islands merit reviewing. In particular, the University of South Pacific (USP) represents one of the more successful cooperative endeavors in the region. USP was founded in 1968 by 12 island states with a main campus on Suva (Fiji) and two other major campuses in Apia, Samoa and Port Vila, Vanuatu. In 1973, USP also launched USPNet to support a distance education programme which was upgraded in 2006 to provide videoconferencing facilities. More than half of USP's now 20,000 students are distance learning students — a very significant achievement.

In a recent 2008 Asian Development Bank study⁹, a number of lessons are outlined from USP's experience in implementing a long-term regional capacity development initiative. Although these lessons were particular to the challenges in developing USPnet, they could have wider applicability for other regional capacity building initiatives¹⁰:

Strong Leadership: The first lesson is the need for strong and consistent leadership, particularly in the hub organization, in a regional capacity development initiative. Capable leadership is required to drive the initiative over the long term and to keep all member governments and other stakeholders engaged and committed to a shared vision on an ongoing basis.

⁷ European Commission, Directorate for Education and Culture, Implementation of 'Education and Training 2010' Work Programme: Key Competencies for Lifelong Learning, A European Reference Framework, November 2004

⁸ See attached Annex "Postsecondary ICT Education Providers in the Pacific Region" kindly provided by the University of South Pacific

⁹ See Footnote 2.

¹⁰ The lessons learned have been paraphrased to make them more generic in applicability.

Participatory Approach: The second lesson is the value of a highly participatory approach to the design and implementation of such initiatives and putting in place systems to gain regular feedback on performance from clients. The adoption by senior management of consultative decision-making processes has proved invaluable.

Retention of Key Staff: The third lesson is the critical importance of retaining highly qualified individual capacity in key positions, in USP's case, especially in technical areas responsible for the information and communications technology development aspects.

Accessible Project Planning System: A fourth lesson relates to the value of adopting an accessible project planning system that provides information to all stakeholders across the region on activities.

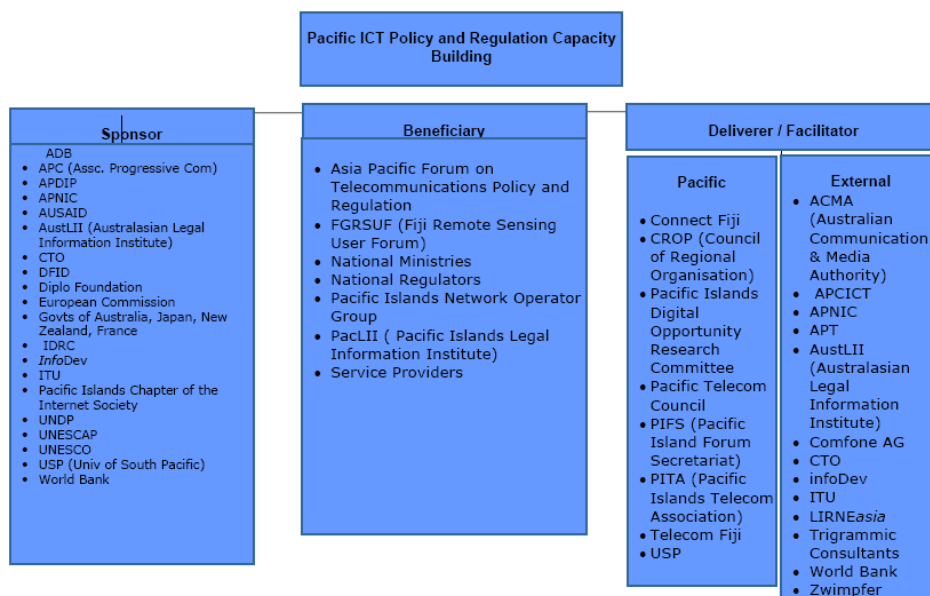
Promoting the Vision: The fifth lesson is the importance of promoting a shared vision throughout a regional network and marketing the benefits of activities to stakeholders.

Clearly Defined Roles: The sixth lesson is the critical importance of ensuring clarity in roles and responsibilities of persons responsible for implementing activities across a regional network.

4.0 ICT Capacity Building Activities in the Pacific

A recent *Infodev* Working Paper (January 2008)¹¹ has identified a very large number of the institutions involved in policy and regulatory capacity building activities in the region. In a recent survey covering 8 Pacific Island Countries in the *Infodev* study, 172 out of 200 initiatives were sponsored by donor agencies and regional organizations. Figure 4.1 shows the list of sponsor, beneficiary and facilitator organizations of these programmes.

Figure 4.1



Source: Building Local Capacity for ICT Policy and Regulation: A Needs Assessment and Gap Analysis for Africa, the Caribbean, and the Pacific, Infodev, 2008

¹¹ Building Local Capacity for ICT Policy and Regulation: A Needs Assessment and Gap Analysis for Africa, the Caribbean, and the Pacific, Infodev, 2008

The large number of institutions involved in supporting Pacific capacity building needs suggests opportunities to build better cooperation and synergies across these programmes. As examples, ITU has in place cooperation agreements with the Government of Australia, the European Commission and PITA to cooperate on targeted Pacific capacity building activities.

Specific Pacific capacity building activities in ICTs worth highlighting include the following institutions:

- Pacific Island Telecommunications Association (PITA) who hosts trainings in collaboration with other agencies and serves as an important source of technical training in the Pacific telecom industry;
- Secretariat of the Pacific Community (SPC)¹². SPC offers technical support to all Pacific Islanders from its IT sections in Noumea and Suva on an ad hoc basis and mostly through the PICISOC network;
- Pacific Islands Applied Geoscience Commission (SOPAC)¹³;
- United Nations Asian and Pacific Training Centre for Information and Communication Technology (UN-APCICT)¹⁴;
- One Laptop Per Child (OLPC) Oceania project¹⁵;
- Pacific Rural Internet Connectivity System (PACRICS)¹⁶;
- ITU Internet Training Centres: a partnership with Cisco Systems, Microsoft Corporation and the European Commission.

Besides the general activities mentioned above, another approach is through expert missions through direct technical assistance to countries, typically by seconding external experts. These experts work with national teams and carry out skills transfer on the job. This type of capacity building has the potential to be quite effective as the output is customized to specific national needs.

5.0 Primary Challenges and Skills Shortages

The primary needs for human capacity building related to ICTs based on ITU's interaction with Member States and partners include:

- **Policy and regulation** including licensing, interconnection, dispute settlement, tariff regulation, spectrum management and pricing, cybersecurity, VoIP and broadband regulation;
- **Engineering and Network** related issues such as Internet and broadband technologies, IT systems, spectrum engineering and planning, Next Generation Networks, satellite technologies, submarine cable technologies;
- **Legal expertise** to formulate new legislative frameworks in the areas of **telecom**, **broadcasting** and **cyber-legislation** as well as **dispute resolution** in a competitive environment;

¹² <http://www.spc.int>

¹³ <http://www.sopac.org>

¹⁴ <http://www.unapcict.org/>

¹⁵ <http://wiki.laptop.org/go/Oceania>

¹⁶ The PACRICS project objective is to provide low-cost, reliable and easy-to-use opportunities for Pacific rural and remote communities to connect to the Internet. See www.pacrics.net.

- **ICT Applications** including e-applications in general and, in particular, **e-government, e-health, and e-education**;
- **Business management issues** including **auditing and finance, marketing and product development** areas to increase brand awareness and package products best suited to the markets.

6.0 The Way Forward

Moving forward, there is a need to have a strategy that address the ICT skills gap through skills development in the medium and long term while providing short term measures to fill the immediate gap.

In the medium and long term, there is a need for strengthening the ICT curriculum in the schools as well as higher institutions. Specific activities could include information exchange on ICT-related curricula and shared educational materials, development of pan-regional educational governance and accreditation, and developing qualified instructors and additional educational facilities to meet the needs of the region. These can be facilitated through direct technical assistance from national governments, regional and international development agencies, with a particular emphasis on “train the trainers” initiatives to improve longer term sustainability.

A prerequisite to such endeavors is the availability of low-cost end user devices and high-speed connectivity to all the schools. National efforts supplemented by regional cooperation to build synergies are an urgent requirement. Lessons can be drawn from experiences with USPnet and projects such as the Pacific Rural Internet Connectivity System (PACRICS)¹⁷.

In addition to promoting ICTs in education, the existing workforce requires capacity building initiatives to develop new skills and to refresh existing ones. In the information age, there is often a problem of excessive information availability which poses major challenges to filter and convert to pragmatic information for understaffed institutions. The focus needs to be on specific skill development rather than on information transfer — meeting this objective requires delivery of customized trainings and identifying appropriate candidates for such skill building.

A comprehensive Human Resource Development programme is a requirement at National and Institutional levels with support from development and donor agencies. Such programmes can be developed on a regional basis in areas of common needs and as part of national framework for specific issues. To address the challenges of high travel costs and inability for staff to be absent from the work place for long periods, an increased reliance on e-learning for skills development is likely (USP’s success in this regard have paved the way). Courses on specific skills required in the Pacific Islands Countries, followed by online social collaboration networks to enable application of that skill would enhance the value of such initiatives. These initiatives should be built in partnership with educational institutions and private training institutes to provide the initiatives with the greatest practical value.

The state of transition in Pacific Island Countries has created immediate gaps that require import of skills, mostly as direct technical assistance. Such technical assistance can serve as a useful platform to build capacity at work if skills transfer to staff is clearly part of the project. Skills exchange and staff rotation amongst the countries of the region or availability of a resource pool within the region might serve as cost effective measures as well.

¹⁷ Idem.

One of the key objectives of the Pacific ICT Ministerial Forum is to strengthen the efforts of stakeholders and develop partnerships. There are undoubtedly numerous opportunities for greater coordination in capacity building amongst actors in the region. In particular, it is all too common that donor/development agencies are unaware of similar activities and may be involved in parallel or duplicative efforts. One possible outcome of the Forum would be the establishment of an ongoing mechanism or annual forum to better facilitate coordinated efforts in Human Capacity Building to maximize benefits to Pacific Island Countries.

Annex 1: Postsecondary ICT Education Providers in the Pacific Region

Source: Courtesy of University of South Pacific



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