The ICT in Education in Asia and the Pacific Project

In the countries of Asia and the Pacific, the use of ICT in education has been developing rapidly. As the presence and use of ICT continue to expand, schools, universities and other educational institutions will need to develop performance indicators to monitor the use and outcomes of technologies, as well as to demonstrate accountability to education stakeholders, funding sources and the public. These indicators are needed to show the relationships among technology use, educational reforms, the empowerment of teachers, changes in teaching and learning processes and student learning. There is a need to show that technology education should be seen not only as an end in itself, but as a means to promoting creativity, empowerment and equality, producing efficient learners and problem solvers.

To study and assess the actual impact of the utilisation of ICT, UNESCO is conducting the Performance Indicators on ICT for Education Project as part of ICT in Education in Asia and the Pacific Programme, an international undertaking funded by the Japanese Funds-In-Trust (JFIT).

The Project will develop a structure of indicators to measure ICT use in education and provide a basis for policy planning and programme improvements, specifically demonstrating how ICT is raising standards in education, serving as a catalyst for educational change. To achieve this objective, the following strategies are being implemented:

- Undertaking a situational analysis on existing projects/activities measuring the impact of the use of ICT in education within and outside the region and on this basis, identify an appropriate set of performance indicators which could be adapted or developed for application in the region;
- Pilot testing this set of indicators in selected countries;
- Developing a systematic mechanism and database for the collection, storage, analysis and dissemination of the indicators based on a network of regional, sub-regional and national focal centres;
- Promoting data utilisation and undertaking advocacy work to convince educational policy makers and administrators to mainstream the collection and maintenance of indicators into their national educational policies and management information systems;
Building national capacity in the collection, processing and dissemination of indicators; and
Implementing an information repackaging programme to ensure that the results/data collected dealing with these indicators are disseminated and utilised for policy and programme adjustments and improvements.

An initial assessment of the indicators developed in earlier research showed their largely quantitative nature. While data that was collected from these initial indicators could provide an overall view of infrastructural support and ICT penetration, they did not delve into measuring how ICT has been used to promote the development of creativity, interactivity, collaborative learning, critical thinking and problem-solving.

This Project will not stop at constructing new indicators; it will proceed to promoting the use of these new indicators by policy makers. The new ICT indicators will not only take a snapshot of current conditions; they will also point out directions for policy and thus be considered as the stimulus for change. Eventually, educational policy makers and administrators should mainstream the use of these indicators into their national educational policies and management information systems.

However, to be able to assess such relationships, appropriate measurement tools were deemed necessary: a structure of performance indicators that would gauge the level of change brought about by the use of ICT in education towards the formation of a learning and knowledge society. The conduct of the Project would then require the exploration of certain issues: (a) the development of indicators which can represent both quantitative and qualitative improvements in education as a result of ICT use; (b) the measurement of ICT usage with a focus on equity; that is widespread and equal access to ICT (e.g. between gender; between and within countries); and (c) methods of collecting data on the selected indicators.

To initiate the Project, UNESCO held a Consultative Workshop for Developing Performance Indicators for ICT in Education, held from 28 to 30 August 2002 at SEAMEO INNOTECH in the Philippines.

The overall objective was to develop a set of core indicators to assess the impact of ICT in education. More specific objectives included:

To provide an understanding of how selected countries use computers in schools and of efforts to measure the effects of ICT use in education;
To present a regional situational analysis synthesising experiences and lessons learned in the use of ICT indicators in Asia and the Pacific;

To share the experiences and initiatives from other regions (e.g. Europe, the Baltic and CIS countries) to measure the impact of ICT in education; the set of indicators used in these various regions; the results of their use and pilot testing; lessons learned and implications of their experiences on Asia and the Pacific;

To recommend a set of indicators for measuring ICT use in education in Asia and the Pacific, including a rationale for each and methods of data collection and use; and

To recommend methods and mechanisms for pre-testing, data collection, processing, storage and dissemination.

This Consultative Workshop sought these following outputs:

A set of core indicators which will be pilot tested in selected countries to measure the impact of the use of ICT in education;

Strategies, methods and work plan for collecting, processing, storing, and disseminating data from ICT indicators surveys; and

Best practices, successful experiences and lessons learned from selected countries in Asia and the Pacific and other regions of the world in the development and use of ICT indicators in education.

The 13 participants of the Workshop came from:

- Australia
- South Korea
- India
- Thailand
- Malaysia
- Uzbekistan
- The Philippines
- Viet Nam

The participants were either the head of the ICT programme of the Ministry of Education of their country, the official in charge of Educational Management Information Systems involved in the ICT project; or the head of the group evaluating the use of ICT in education.

A number of these participants are in charge of pilot testing the set of ICT indicators generated by this Consultative Workshop.

Four resource persons from the UNESCO Institute of Information Technology for Education in (Russian Federation); UNESCO Institute for Information Technology in Education (United Kingdom); the Research and Innovation Department of the Southeast Asian Ministers of Education Organisation (SEAMEO) Regional Centre for Educational
Innovation and Technology (INNOTECH), based in the Philippines; and the New South Wales Department of Education and Training (Australia) were invited to share experiences on ICT indicators and provide technical advice to the Workshop in formulating the indicators.

Prior to the Consultative Workshop, the participants prepared a report on their country’s experiences on the use of ICT in education and their efforts to assess the impact of the use of ICT in education, as can be found in Chapter 2.

After the inauguration by Dr Zenaida T Domingo, Head of the Business Development Office and Senior Training Specialist, SEAMEO INNOTECH and the welcome remarks of Dr Eligio B Barsaga, Programme Director for Research and Innovation, SEAMEO INNOTECH, Ms Carmelita L Villanueva, Chief of UNESCO Bangkok Information Programmes and Services and the Regional Clearing House on ICT in Education presented the Keynote Speech on behalf of Mr Sheldon Shaeffer, Director, UNESCO Asia and Pacific Regional Bureau for Education.

Ms Villanueva pointed out that the Consultative Workshop set the tone and served as a springboard for the implementation of the J FIT-funded project on Performance Indicators for ICT use in Education. It was expected to generate a set of indicators which will provide benchmarks and guideposts for the countries’ evaluation of their ICT projects in education, as well as UNESCO’s ICT and policy and strategy development, teacher training, ICT-based curriculum and materials development. These indicators, Ms Villanueva went on, will be used to monitor the use and outcomes of technologies and to demonstrate accountability to funding sources and the public. The indicators should show the relationships between technology use and educational reforms, empowerment of teachers, changes in teaching and learning processes and student learning.

However, she stated, there had not been systematic efforts in the countries of the region to measure the impact of ICT use in improving the teaching and learning process, not to say the educational system as a whole. In this point, this Workshop was a trailblazer, as it was the first study to assess ICT use in education using a holistic approach. Ms Villanueva showed the objectives, strategies and expected outcomes of the Indicators’ Project, as well as how the countries can assist in pilot testing the indicators generated from the workshop.