ICT IN EDUCATION
POLICIES THAT MAKE SENSE[1]

Background Paper to the UNESCO Presentation during the
2nd National ICTs in Basic Education Congress
(6-7 September 2006, Cebu, Philippines)

UNESCO's Function

As the name suggests, the United Nations Educational, Science and Cultural Organization (UNESCO) is a UN technical agency responsible for the development of education, science and culture. Its involvement in ICT in Education can be best understood in the context of its regular functions, namely:

- A laboratory of ideas – UNESCO is willing to test pilot projects in order to share lessons (success stories as well as pitfalls) to member-states. This way everyone avoids costly mistakes.

- A clearinghouse – UNESCO initiates and coordinates regional and worldwide networks to promote research, exchange research results and training. World experts are invited in international conferences to elaborate on new approaches to major education issues confronting many countries today.

- A standard-setter – UNESCO's international perspective and experience help member-states to agree on common rules and practices in education.

- A capacity-builder – UNESCO acts as an advisor to its member-states when it concerns development of policies and national strategies.

- A catalyst for international cooperation – UNESCO acts as a broker between the member-states and the donors when an innovative project idea is ready for implementation on a national scale.

UNESCO's Regional Bureau for Education based in Bangkok, Thailand is accountable to 44 member-states in the Asia and Pacific. Consistent with its role as a capacity-builder, UNESCO's ICT in Education Policy project aims to build national capacities to help policymakers and educational planners develop appropriate ICT in Education policies and plans.

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What do Policymakers Need?

According to an international study[2], there are certain obstacles that prevent policymakers from doing what they are supposed to do – make policies. This paper has trimmed the number down to four basic ones. These are:

i) Lack of awareness	On the role that ICTs can play in development; on the importance of international decisions and their effects on national ICT policies and regulations.
ii) Lack of technical and policy capacity	When policymakers only provide general overview of the policy areas but have little idea on the "next step" such as detail of issues and the variety of options in their national environments.
iii) Lack of political leadership	The absence of national ICT strategies may reflect low political interest or simply not a priority in the political agenda
iv) Lack of coordination	The lack of coordination between agencies that are supposed to work together and make coherent policies suggests there is no clear leadership. Both instances (lack of leadership and lack of coordination) reflect a weakness in national policy institutions and processes.

The study, of course, gave practical suggestions to address these barriers. They will be discussed at the end of this paper. But first, we have to put them in the perspective and interest of this Forum – Education and ICT.

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[2] LOUDER VOICES: Strengthening Developing Country Participation in International ICT Decision-Making, see www.cto.int/publications/louder_voices_final_report.pdf

UNESCO Message – Need to Find Policies that Make Sense

To develop a good policy, one should have at least a clear understanding of both education and ICT. However, there are some educational policymakers that question the values of ICT and would rather "wait and see" how other countries will do it. Still, there are others who believe in myths surrounding ICT such as computers will soon replace teachers, and using technology means automatic improvement of quality of education. But, perhaps, the most confusing for policymakers are the constant pressures from vendors who want to sell; from parents who want the best education facilities available in schools; from the business sector who wants graduates to be computer literate; and even the techies who wants to promote use technology. Thus, making it harder to decide which policies really make sense.[3] For these reasons, policymakers themselves recommended to UNESCO in 2004 to develop a toolkit that will contain useful resources and make policymaking more systematic.

Policymakers and educational planners are invited to participate in a one-day workshop on "Introduction to the online ICT in Education Toolkit for Policymakers, Planners and Practitioners" on 8 September 2006. Please contact the Secretariat to reserve a seat and computer for the hands-on session.

To illustrate what is meant by finding policies that make sense, the following background should lead to our core messages.

Background No. 1

Access to education is still a big problem. According to the latest EFA Global Monitoring Report (2006), there are 511 million illiterates (cannot read and write) in the Asia Pacific region, of which 132 million are between the ages of 15-24. Add another 45.5 million children who out of primary schools and would soon revert back to illiteracy having not finished their basic education. And add another 60-80 million out-of-school youth (estimate based on 64.3 net enrolment rate or NER).

Background No. 2

Access to computers and internet is still very limited. Geographically speaking, Asia, after Africa, has the lowest concentration of PC and internet users. Looking at a few Asian countries individually, Laos and Cambodia have less than 1% of their population using computers and the internet; Vietnam and Philippines and Thailand slightly better, but generally not more than 10% of population. See table next page.

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[3] These issues are discussed in the DECISION MAKERS ESSENTIALS inside the online "ICT in Education Toolkit for Policymakers, Planners and Practitioners", www.ICTinEDtoolkit.org

2004 data	Computers per 100 inhabitants	Internet users per 100 inhabitants
Africa	1.73	2.63
Americas	34.03	30.79
Asia	6.27	8.18
Europe	29.00	31.74
Oceania	50.84	51.77
World	12.82	13.70
USA	74.06	62.28
UK	60.02	62.88
France	48.66	41.37
Germany	56.10	50.00
Cambodia	0.26	0.28
Lao P.D.R.	0.38	0.36
Philippines	4.46	5.32
Thailand	6.00	11.25
Vietnam	1.27	7.12

For complete list of countries, visit
www.itu.int/ITU-D/ict/statistics/at_glance/Internet04.pdf
Source: International Telecommunications Union

ICTs in households
percentage

Source:
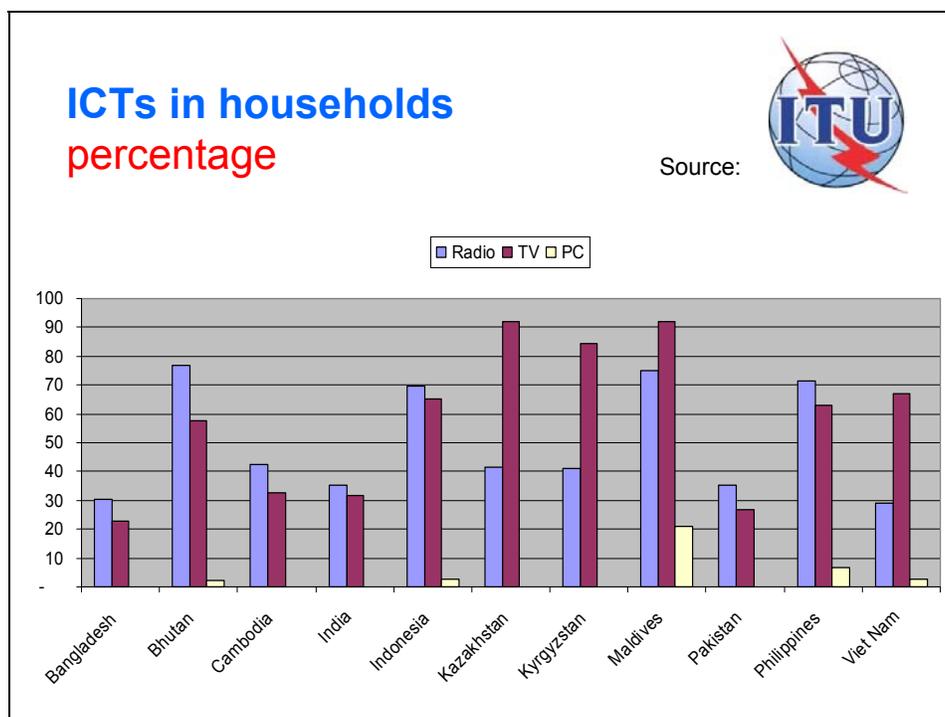
Background No. 3

On the other hand, comparing the availability of radios, television sets and computers in households in a number of Asian countries would show that the reach of either television or radio sets is far and wide (as high as 90% of the population). See graph on preceding page.

Background No. 4

Example 1. According to one research, "every hour of instruction using an interactive CD requires at least 300 hours of preparation" while traditionally, a teacher only has to invest one hour for face-to-face classroom instruction and between 3-5 hours to prepare written materials.

Example 2. In 2005, one Philippine educator suggested the use ICT not just to improve science education in the country but to address poor teaching of science in many schools. How? She proposed televised teaching of science by this science educator who just received international recognition for effectively teaching the subject to her students despite inadequate facilities in her school.

Both instances use ICT but the effect on the work of the teachers is different. Using a CD-ROM for classroom instruction puts pressure to attend training outside of the classroom hours, while the televised teaching of science relieves pressure on many teachers to teach a difficult subject.

Background No. 5

Earlier this year (2006), one Philippine newspaper writer or contributor suggested that Philippines should start exploring the "one-laptop per child policy", obviously referring to $100 laptop initiative. If this policy is adopted, how much will it cost the government?

Public Enrolment	
-- Elementary	12,089,365
-- High School	5,043,776
Total	17,133,141
Cost of laptop (US$ 100)	Php 5,100
Enrolment x cost of laptop	Php 87,379,019,100
Public Teachers	
-- Elementary	340,231
-- High School	123,074
Total	463,305
Teachers x cost of laptop	2,362,855,500
GRAND TOTAL	**89,741,874,600**
DepEd 2006 Budget	119,087,000,000
* need to increase budget by 75% if OLPC policy is adopted	

In view of the foregoing, UNESCO's core messages are the following:

1.   ICT is not only computer and internet.

        In UNESCO's definition, ICT also includes other technologies such as radio and television. Limiting ourselves to computers will not enable us to reach as many as possible.

2.   Technology is only a tool to achieve our education objectives.

        And not the other way around where you buy first the technology and then you only start to think of ways you can use it in education.

A policy makes sense IF…

3.   It will reach more children not currently reached by the conventional delivery system.

        UNESCO's interest in ICT is in its potential to help achieve EFA (education for all) goals (visit www.unescobkk.org/efa).

4.   It will ease teachers' load.

        If teachers are lacking in many schools and are generally overworked, then we should find ways to help them and avoid adding more demands/ responsibility to their already heavy burden.

5.   It will affordable to member states.

        In countries that can afford the heavy investment like Singapore, the policy of one laptop per child and equipping all classrooms with computers make sense. In developing countries like Philippines, Cambodia and Vietnam, we should find a realistic alternative solution.

6.   If technology is widespread.

        If computers and internet reach only less than 10% of the population, while radio and TV are still widely used here in Asia, aren't these old but still effective technologies making any sense? For a good argument on the use of TV in education, see Chapter 2: Are new technologies better technologies? For whom? by Claudio de Moura Castro, in "Adopting technology for school improvement: a global perspective, www.unesco.org/iiep/eng/publications/recent/ict.htm

Recommendations

This paper recommends to the participants and organizers of this "World Links ICT in Education Regional Policy Forum" the following:

1. Creation of Network of Policymakers who are interested to know more about ICT in Education Policymaking

    The arguments to do this are i) policymakers are important players if we want to develop faster ICT innovations in education; ii) policymakers need a support group to foster greater awareness on ICT in Education issues and challenges, and develop the technical competence to identify good policies and strategies; and iii) there is no existing Regional Network of Policymakers with ICT in Education as a regular agenda.

2. Agree on a Regional Policy Research Agenda that would help policymakers

    It is true that there are already a number of researches on ICT in education but very few have attempted to conduct these researches with the end in view of helping policymakers. Moreover, the absence of a research agenda meant that researches were undertaken sporadically and without coordination, often resulting to repetitions. The arguments for a Regional Policy Agenda are: i) countries can agree on certain topics of common interest; ii) the donors will be happy to support financially because they will see direction and purpose in the research agenda; and iii) the results of these researches will be a regular agenda in the Network of Policymakers.

3. Support a Regular Training Programme for ICT in Education Policymakers and Educational Planners

    UNESCO aims to implement a series of workshops in 2006, 2007 and possibly beyond to help policymakers and educational planners work hand-in-hand through the "ICT in Education Toolkit for Policymakers, Planners and Practitioners". We are certainly interested to collaborate with the participants and organizers of this Forum and make this training programme a regular activity in the Asia Pacific region. The main argument for this is that people come and go and when they leave their offices, they bring with them the experience and training they received, thus there is a need to ensure constant updating of awareness, knowledge and skills in ICT in Education planning and policymaking.