

World Conference
“ICT for Capacity-Building: Critical Success Factors”
organized by UNESCO and the Club of Rome.

Date: 11-13 May 2005

Venue: UNESCO Headquarters, Room II

Address: 7, place de Fontenoy
75352 Paris 07 SP
France

This document contains background information
on the purpose of the conference

Purpose of the Conference

The first phase of the World Summit on the Information Society (WSIS), Geneva 2003, resulted in a "call to action" by world leaders to use information and communication technologies (ICT) in the service of development. This was a response to the "digital divide", which can be characterized as the "knowledge divide", between those who have access to the capacity-building tools of the 21st century and those who do not. There is a critical need to alleviate poverty and address the growing disparity between the knowledge "haves" and "have-nots" that is, between those who have access to the requisite knowledge, expertise and technologies to accelerate their social and economical development, and those who are excluded.

Therefore, The Club of Rome and UNESCO decided to organize a World Conference to address the key challenge of how to develop the human capacities necessary for building inclusive knowledge societies that empower people, facilitate development, stimulate local entrepreneurship and enable social inclusion and participation. In today's world, the use of ICT is integral to this process.

Through this World Conference, the Club of Rome and UNESCO are providing a platform for a global dialogue on the theme: "*ICT for Capacity-Building: Critical Success Factors*".

The Club of Rome emphasizes that narrowing the digital divide and reducing illiteracy are necessary steps to poverty alleviation, and therefore are an integral part of reaching sustainable societies. This interrelationship is expressed in its Statements to the World Summits of Johannesburg and Geneva: "*education for all is an imperative for sustainable societies*".

The effort to build human capacities relies on education. This is reflected in UNESCO's drive for *Education For All*. The focus on capacity-building through education and on the use of ICT for development, are key strategies for achieving the UN Millennium Development Goals (MDGs).

The Conference will explore examples from around the globe on the role that ICT, particularly satellite, can play in reaching the MDGs. There will be a strong emphasis on non-formal education, such as skills development programmes and the special needs of marginalized groups who are not being reached by classical education methods. Particular attention will be paid to those groups in rural and remote areas who are accessible by satellite technologies.

Content and expected results of the World Conference

The first phase of the WSIS identified what needs to be done to address the challenges and build inclusive knowledge societies - resulting in the WSIS Action Plan. The second phase, which will take place in Tunis in November 2005, should identify, mobilize and co-ordinate potential partners for action, exchange experiences and know-how on how to implement the Action Plan, and set-up processes for future monitoring and evaluation of progress.

The outcomes of the World Conference are intended to be an input to the second phase of the WSIS. They will illustrate how ICT, including satellite, can be used to deliver on the WSIS Action Plan and contribute to achieving the MDGs, in particular:

- Identification and mobilization of potential partners for action, based on the evidence of the capability of local people to use ICT effectively, including satellite, for and in education and to accelerate economic and social development;
- Identification of preconditions for successful capacity-building projects and policy design through formal and non-formal education, including success and risk factors, indicators, and the setting of realistic time-frames;
- According to proposed activities and projects, the identification of requisite resources, in particular financial resources and expertise, and corresponding calls of interest to partners and stakeholders to contribute;
- Increasing know-how among stakeholders on how to implement successful capacity-building projects utilizing ICT, through broadcasting lessons from the Conference, case studies and disseminating the Conference conclusions.

Prerequisites, success factors, and lessons learnt

Testimonies and case studies presented during the conference will illustrate prerequisites for the successful use of new technologies in capacity-building, the success factors in their implementation, and lessons to be learnt. Key issues to be addressed include:

- Sustainability (e.g. project sustainability, cost effectiveness);
- The monitoring and evaluation of impact (e.g. clear definition of impacts, including educational and social impacts, evaluation methodology, resources);
- Infrastructure needs (e.g. satellite infrastructure, telecommunications agreements, power supply);
- Relevant content in appropriate languages;
- Local champions, i.e. “winning hearts and minds”, social aspects;
- Availability of human resources (e.g. need to train project managers);
- Hardware and software that are appropriate to the local conditions;
- The importance of an integrated approach to all of the above.

The Conference is also the opportunity to hear from industry and technology experts on how to ensure that technology is appropriate to the development environment and what solutions and partnering approaches can meet the needs of people in developing countries.

Scope of the World Conference

The three-day Conference will have global scope bringing together local leaders and community educators as well as experts in education, from all continents with the help of the Global Development Learning Network of the World Bank Institute.

The use of Centers affiliated with the Global Development Learning Network (GDLN) provides a unique opportunity to establish a ‘live’ discussion platform with diverse audiences being able to share their experiences worldwide. By extending the reach of the Conference, GDLN makes it possible to bring in views and participants globally and cost-effectively. Hence, the Conference will not be constrained by geographical barriers with the use of GDLN’s services, which are primarily interactive videoconferencing and high-speed Internet resources.

The Conference has been designed to reach three categories of participants and beneficiaries, corresponding to three different means of communication and dissemination:

- **‘Focal-point level’:** experts and leaders in education, of intergovernmental organizations, NGOS, private sector, academia and governments will discuss and participate in a series of plenary and thematic discussions, at UNESCO Headquarters.
- **‘Interactive level’:** people and communities from Africa, Arab States, Asia, and Latin America will share their experience and practices, success stories and lessons in the use of ICT in education and capacity building, through interactive sessions operated by GDLN.
- **‘Dissemination level’:** the Conference will be recorded at UNESCO and disseminated through GDLN and web technology. The proceedings will be made available for the WSIS in Tunis.

Planned connections to GDLN

During the Conference, four 3-hour interactive sessions are scheduled. At each session, the local participants of a continent or region contribute to the conference and are live in dialogue with a panel as well as the ‘focal-point’ gathered at UNESCO. The following connections will be set up:

- For Latin-America: Brasilia (Brazil), Guadalajara (Mexico) and Buenos Aires (Argentina);
- For Arab States and Central Asia: Kuwait City (Kuwait), Amman (Jordan) and Cairo (Egypt);
- For Africa: Dar es Salaam (Tanzania), Dakar (Senegal) and Pretoria (South Africa)
- For Asia: Beijing (China), New Delhi (India) and Kabul (Afghanistan).

Proceedings and Dissemination

The dissemination plan of the conference makes extensive use of the new technologies themselves in order to reach a worldwide audience.

First, with the help of Alcatel Space, the entire conference will be webcast on the Internet 'live' during the event and after 'on demand' for the period till the World Summit in November 2005. In this way parts of the Conference can be reviewed anywhere and any time, either individually or through local projection facilities in communities, schools and universities.

Second, it is planned to broadcast proceedings by satellite television and radio. Excerpts of the 'live' recorded version will be edited and replayed shortly before the World Summit in November. Information about time frames and geographic distribution will be announced via the web site.

Third, the different contributions of the Conference, including the interactive sessions, will be collected for proceedings to be published online at <http://esc.clubofrome.org/worldconference.html>, as well as in printed format and in CD-ROMs. The proceedings are planned to be presented during the World Summit in Tunis in November 2005.

About the WSIS Action Plan on Capacity-building

Introduction

The common vision and guiding principles of the Declaration are translated in this Plan of Action into concrete action lines to advance the achievement of the internationally-agreed development goals, including those in the Millennium Declaration, the Monterrey Consensus and the Johannesburg Declaration and Plan of Implementation, by promoting the use of ICT-based products, networks, services and applications, and to help countries overcome the digital divide. The Information Society envisaged in the Declaration of Principles will be realized in cooperation and solidarity by governments and all other stakeholders.

The Information Society is an evolving concept that has reached different levels across the world, reflecting the different stages of development. Technological and other change is rapidly transforming the environment in which the Information Society is developed. The Plan of Action is thus an evolving platform to promote the Information Society at the national, regional and international levels. The unique two-phase structure of the World Summit on the Information Society (WSIS) provides an opportunity to take this evolution into account.

All stakeholders have an important role to play in the Information Society, especially through partnerships:

- a) Governments have a leading role in developing and implementing comprehensive, forward looking and sustainable national e-strategies. The private sector and civil society, in dialogue with governments, have an important consultative role to play in devising national e-strategies.
- b) The commitment of the private sector is important in developing and diffusing information and communication technologies (ICTs), for infrastructure, content and applications. The private sector is not only a market player but also plays a role in a wider sustainable development context.
- c) The commitment and involvement of civil society is equally important in creating an equitable Information Society, and in implementing ICT-related initiatives for development.
- d) International and regional institutions, including international financial institutions, have a key role in integrating the use of ICTs in the development process and making available necessary resources for building the Information Society and for the evaluation of the progress made.

Action Lines adopted

- C1. The role of governments and all stakeholders in the promotion of ICTs for development;
- C2. Information and communication infrastructure: an essential foundation for the Information Society;
- C3. Access to information and knowledge;
- C4. Capacity building;
- C5. Building confidence and security in the use of ICTs;
- C6. Enabling environment;

- C7. ICT applications: benefits in all aspects of life;
- C8. Cultural diversity and identity, linguistic diversity and local content;
- C9. Media;
- C10. Ethical dimensions of the Information Society;
- C11. International and regional cooperation.

Capacity building action line

Everyone should have the necessary skills to benefit fully from the Information Society. Therefore capacity building and ICT literacy are essential. ICTs can contribute to achieving universal education worldwide, through delivery of education and training of teachers, and offering improved conditions for lifelong learning, encompassing people that are outside the formal education process, and improving professional skills.

a) Develop domestic policies to ensure that ICTs are fully integrated in education and training at all levels, including in curriculum development, teacher training, institutional administration and management, and in support of the concept of lifelong learning.

b) Develop and promote programmes to eradicate illiteracy using ICTs at national, regional and international levels.

c) Promote e-literacy skills for all, for example by designing and offering courses for public administration, taking advantage of existing facilities such as libraries, multipurpose community centres, public access points and by establishing local ICT training centres with the cooperation of all stakeholders. Special attention should be paid to disadvantaged and vulnerable groups.

d) In the context of national educational policies, and taking into account the need to eradicate adult illiteracy, ensure that young people are equipped with knowledge and skills to use ICTs, including the capacity to analyse and treat information in creative and innovative ways, share their expertise and participate fully in the Information Society.

e) Governments, in cooperation with other stakeholders, should create programmes for capacity building with an emphasis on creating a critical mass of qualified and skilled ICT professionals and experts.

f) Develop pilot projects to demonstrate the impact of ICT-based alternative educational delivery systems, notably for achieving Education for All targets, including basic literacy targets.

g) Work on removing the gender barriers to ICT education and training and promoting equal training opportunities in ICT-related fields for women and girls. Early intervention programmes in science and technology should target young girls with the aim of increasing the number of women in ICT careers. Promote the exchange of best practices on the integration of gender perspectives in ICT education.

h) Empower local communities, especially those in rural and underserved areas, in ICT use and promote the production of useful and socially meaningful content for the benefit of all.

i) Launch education and training programmes, where possible using information networks of traditional nomadic and indigenous peoples, which provide opportunities to fully participate in the Information Society.

j) Design and implement regional and international cooperation activities to enhance the capacity, notably, of leaders and operational staff in developing countries and LDCs, to apply ICTs effectively in the whole range of educational activities. This should include delivery of education outside the educational structure, such as the workplace and at home.

k) Design specific training programmes in the use of ICTs in order to meet the educational needs of information professionals, such as archivists, librarians, museum professionals, scientists, teachers, journalists, postal workers and other relevant professional groups. Training of information professionals should focus not only on new methods and techniques for the development and provision of information and communication services, but also on relevant management skills to ensure the best use of technologies. Training of teachers should focus on the technical aspects of ICTs, on development of content, and on the potential possibilities and challenges of ICTs.

l) Develop distance learning, training and other forms of education and training as part of capacity building programmes. Give special attention to developing countries and especially LDCs in different levels of human resources development.

m) Promote international and regional cooperation in the field of capacity building, including country programmes developed by the United Nations and its Specialized Agencies.

n) Launch pilot projects to design new forms of ICT-based networking, linking education, training and research institutions between and among developed and developing countries and countries with economies in transition.

o) Volunteering, if conducted in harmony with national policies and local cultures, can be a valuable asset for raising human capacity to make productive use of ICT tools and build a more inclusive Information Society. Activate volunteer programmes to provide capacity building on ICT for development, particularly in developing countries.

p) Design programmes to train users to develop self-learning and self-development capacities.

About UNESCO's Mandate

Background

The "Education-for-all" initiative is of extreme importance over the world, especially as it links to Millennium Development Goals. Sustainable development of quality primary education is dependent on complementary development in the secondary and tertiary education sectors. With economies relying more and more on the generation and application of knowledge, productivity is increasingly dependent on the development and spread of technological innovation. The 2000 World Bank/UNESCO report "Higher Education in Africa: Promise or Peril" states that Higher education has become more important to development than ever before, due to the increasing importance of knowledge in development – knowledge is power.

The situation, for example, in Sub-Saharan Africa is particularly dire and indicative of the situation in other parts of the developing world. In 2000 only 5% of the higher education age group was in universities compared to a world average of over 16%. The problem of inadequate capacity, dwindling government support, low enrollments in the secondary system and the introduction of school fees, have resulted in limited and unequal access to higher education. There is a strong need for a continent-wide intervention in higher education not only in Africa, but also in other regions, Latin America, Arab States, Asia, South-East Europe, if the problems of access and inequality are to be resolved.

There is great uncertainty about the labour market, an avalanche of new knowledge, and new demands on education in both traditional and uncharted territories. There is a great need to provide the whole spectrum of education services to everyone, anywhere, anytime with a focus on learning acquisition and teacher empowerment—all under conditions of an ever-expanding base of learners and limited physical and human resources.

Modern economic, social, political, and technological requirements demand that all members of society have a minimum level of education. The biggest challenge is to reach individuals and groups that are historically underserved such as girls and women, groups with special needs, rural populations, and adult workers.

Lifelong learning and training for the workplace cannot be confined to the traditional classroom and limited periods of time. It is unrealistic and unaffordable to continue to ask learners to come to a designated place every time they have to engage in learning. To cope with the diversity, complexity, and changing demands for education services, delivery must extend beyond the face-to-face institutional modality. It needs to include distance education, enrichment through mass media, and non-formal settings.

Challenges of ICT in Formal Education

In a large number of cases, ratios in tertiary education are significantly lower than is the norm. At the same time, despite its own difficulties, secondary education has expanded to the point where large numbers of qualified school drop-outs cannot get access to tertiary education. There is an unsatisfied demand for tertiary education from potential students who could benefit while there are not enough institutions / trainers to train them, resulting in a shortage of qualified labour within the economy.

The situation regarding low enrolments in tertiary education is due to several constraints. The first of these is funding: the other pressures on government educational budgets and the relatively high unit

costs of tertiary education restrict university expansion. Second, except in major cities, university education often requires costly infrastructures for student housing with consequent increase in total university costs. Third, in just those subjects where there is the strongest demand from the economy, such as computer science, universities have major difficulties in recruiting and retaining qualified academic staff. These problems in turn are compounded by the effects of HIV-AIDS both in worsening skill shortage through mortality and in reducing the effectiveness of the workforce through morbidity.

Working back from the issue of access to tertiary education, there is also the issue relating to the general quality of the graduates from the secondary school system. Curricula in use at secondary level are often outmoded and cannot be replaced because of lack of funds to update teachers and produce new materials. In addition, weaknesses in science teaching at this level hamper further learning of sciences at tertiary level and the ability of the countries in question to compete in a globalizing world. This situation implies that a significant proportion of the graduates who do not acquire the qualifications to proceed to the tertiary level also do not acquire the skills required to function effectively in civil society. There are correlations between investments in higher education and research and economic growth. ICT in Education, in particular for capacity building, is, therefore, an efficient means to increase economic development and bring about the social transformation to bridge the digital divide.

Needs

Major constraints facing ICT and education in most developing countries are related to several factors, including policy constraints, insufficient financial resources, poor infrastructures and weak technical capacities and skilled staff, among other factors. Important parameters are the appropriateness of technologies, the suitability and quality of instructional materials and educational services made available, learning effectiveness and appropriation of new way of work, and the cost benefit ratio. It is, therefore, important that policy makers are sensitised on the importance to incorporate plans for ICT in education at all levels.

The appropriate and effective use of technologies requires i) the accessibility to technology, content and services, and ii) the availability of competent, committed people and the continued development of their capacity.

For example, unfavourable telecommunication policies impede ICT-enhanced education programs, network-based activities and work, and the access to sources of information. Some countries charge a high tax on computing and telecommunications equipment making the costs unaffordable or prohibit the installation and use of some telecommunications technology (for example, VSAT). Another example is the price of computers and software licenses, which are significantly higher in developing countries than in industrialized countries. In this context, cooperation with the private sector is required so as to make equipment, software and services affordable, especially by education and research institutions. Free and open source software also is a way to strengthen long-term capacities.

Access is not only about access to technology but also to content, services, expertise, through different forms ranging from off-line databases such as directories, training materials, guidelines, to distance publishers databases, open distance learning resources including synchronous and asynchronous services. Networking education actors is essential for providing them with a new and efficient environment for teamwork, possibilities of exchange of knowledge, know-how, and information, for teaching and learning, and for delivering and accessing quality education.

The international community has underlined a number of priority areas to integrate ICT in education, and has included them within the WSIS Plan of Action, and the Information for All Programme objectives. These priorities also meet those identified by the Sectors of UNESCO, in particular the Sectors of Education, and of Communication and Information through their activities:

- The creation of programmes for capacity-building with an emphasis on creating a critical mass of qualified and skilled ICT professionals and experts,
- The integration of ICT into pedagogy, both directly into curricula at all levels, and indirectly, as a means to improve education and learning through services to all education actors,
- The development and delivery of distance learning, training and other forms of education and training as part of capacity-building programmes,

- The development and dissemination of innovative ICT-based alternative educational delivery systems, in particular those based on free open source software,
- The deployment of new forms of ICT-based networking, linking education, training and research institutions between and among developed and developing countries and countries with economies in transition.
- Cooperation with the private sector on activities to enhance the capacity, notably, of leaders and operational staff in developing countries and LDCs, to apply ICTs effectively in the whole range of educational activities,
- International and regional cooperation in the field of capacity-building, including country programmes developed by the UN and its Specialized Agencies,

Priorities

Four major priorities are proposed to enable the CI sector to complement the initiatives and focus of the other sectors, especially the Education and Science sectors, and of UNESCO's Institutes, taking into account its competencies and resources at both headquarters and field offices.

The two first priorities aim at increasing the role of Universities in the production and delivery of e-education content and services:

- the access by all "educationalists" to ICT, including tools, education resources, content and services for integrating ICT in education,
- capacity-building of all actors involved in the education process, which include teachers, trainers of teachers, specialists in e-learning and distance training, specialists in quality assurance, together with decision-makers and education administrators;

The two other priorities aim at networking and improving cooperation among specialised institutions; they cross cut the two other priorities:

- networking education and research institutions so as to transfer to institutions from developing countries know-how, skills, and knowledge in distance and e-learning,
- collaboration with other UNESCO Sectors, specialized organizations, funding bodies, and private sector.

About the Club of Rome's Mandate

The Club of Rome's essential mission is to act as an independent, global, non official catalyst of change. Thus it aims at the identification of the most crucial problems facing humanity, their analysis in the global context of the world-wide issue, the research of future alternative solutions and the elaboration of scenarios for the future.

The first report which The Club of Rome commissioned and published was *The Limits to Growth*, a book which produced a world-wide impact in 1972 (more than 12 million copies have been sold in 27 languages). This report has been followed by almost 30 other reports, on problems ranging from education, poverty, economy and environment, oceans, use of resources and governance. The most recently published report is *Limits to Privatization - How to avoid too much of a good thing*.

The Club of Rome has from its very beginning addressed the problem of education. In 1979 appeared the report *No Limits to Learning. Bridging the Human Gap* and has been re-edited recently in 1998.

Further in its Statement to the World Summit on Sustainable Development in Johannesburg in 2002 (WSSD) *No Limits to Knowledge, but Limits to Poverty: Towards a Sustainable Knowledge Society* the Club of Rome underlined that: 'social sustainability can only be achieved by reducing poverty, worldwide. Poverty is a major threat to stability and an obstacle to further social and economic

development everywhere. Information and communication technologies (ICTs) are doubly essential -for faster growth in developing countries and more eco-efficient growth everywhere. Reducing the “Digital Divide” must therefore become a world wide priority. Development policies must therefore accelerate and widen the development of electronic communications infrastructures, with universal and affordable access, and must enable entrepreneurial, social and cultural use of them.’ In other words, the equation to solve in the next decades is massively reducing poverty through education, in order to reach sustainable societies.

In its Statement to the World Summit on the Information Society of Geneva in 2003 (WSIS) *Towards an New Age of Information and Knowledge for All*, indications for reducing the more digital gap are addressed giving the coherent picture for policy design and the topic of ICT for capacity-building was addressed explicitly announcing the present World Conference. With the use of a wider definition of learning, the non-formal education for young as well as adults addresses new perspectives not only for bridging the digital divide but as well as to train skills and practices useful for improving the living conditions of families and in communities. The advent of ICTs allows the introduction of new learning processes and facilitating their acceleration of their application.

Therefore, non-formal education and capacity-building have to get full attention in development strategies and policy design.

The Club of Rome recognizes the need for a world of ‘learning communities’ in which no culture imposes its values on others and where ‘indigenizing modernity’ and ‘learning from each other’ are values in themselves. The implementation of programs and policies of education -formal and non-formal- have therefore to take into account cultural diversity as well as local practices and knowledge. Under these conditions a beneficial and lasting acceptance by the populations can be expected, leading to better and more sustainable communities and societies.

Throughout its different publications and Statements the Club of Rome continues to contribute to the search for adequate solutions for one of the highest challenges of humankind: the education of all human beings through which dignity and a decent existence for all of its members can be made possible.

The European Support Center of the Club of Rome develops activities in the area of education on environmental problems. Additionally one of the largest networks -about 250 environmental education projects- has been set up and is accessible on the website <http://eeeprojcts.net>.

Further information about the activities of the Club of Rome is available on the websites of the Club of Rome <http://www.clubofrome.org> and of the European Support Centre <http://esc.clubofrome.org>. On the website <http://esc.clubofrome.org/worldconference.html> there will be also additional conference-related material.