



United Nations
Educational, Scientific and
Cultural Organization

UNESCO Bangkok

Asia-Pacific Programme of
Educational Innovation
for Development



The UNESCO
ICT *in Education*
Programme

The UNESCO ICT in Education Programme
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10 pp.

Keywords:

1. Information and communication technologies (ICT)
2. Education
3. Asia-Pacific region

Published in 2007 by

United Nations Educational, Scientific and Cultural Organization (UNESCO)
P.O. Box 967, Prakanong Post Office
Bangkok 10110, Thailand
www.unescobkk.org/education/ict

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Design, Layout and Printing:

Themma Group Co., Ltd.

Printed in Bangkok, Thailand

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Workshop participants using computers to access information.



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Vietnamese teachers using computers

Introduction

Two of UNESCO's key areas of interest are Education for All (EFA) and the need for higher quality education. UNESCO is therefore pursuing various programmes which aim to improve the reach and quality of education.

Another area of concern for UNESCO is the growing "digital divide" between those who have access to modern forms of information and communication technologies (ICT) and those who do not. The concern is that unless the divide is bridged, the lack of access to ICT will have adverse implications in terms of access to information and participation in socio-economic life, particularly in the emerging knowledge societies.

It has been demonstrated that integrating ICT into education systems can increase the quality of education delivery. Use of ICT in formal and non-formal education also offers the potential to facilitate greater access to information and services by marginalized groups and communities.

In 2002, recognizing that there needs to be a comprehensive and informed approach to integrating ICT into education, UNESCO launched the Asia-Pacific "ICT in Education" programme, which has as its main goal: *to assist in harnessing the potential of ICT towards achieving quality education for all in the Asia-Pacific region.*

This programme, supported principally by Japanese Funds-in-Trust, seeks to:

- Identify and promote ways in which ICT can enhance the reach and quality of education in the Asia-Pacific context.
- Draw attention to the possible pitfalls involved in acquiring and utilizing ICT and to the pre-conditions for their successful use.
- Empower teachers, educators, principals, administrators and policy makers to make informed, judicious choices regarding the use of ICT in education.
- Promote greater access to ICT tools by educators and learners.

What is ICT?

The term "*information and communication technologies*" (ICT) refers to forms of technology that are used to transmit, process, store, create, display, share or exchange information by electronic means. This broad definition of ICT includes such technologies as radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems, and computer and network hardware and software, as well as the equipment and services associated with these technologies, such as videoconferencing, e-mail and blogs.

Scope

The ICT in Education programme, funded mainly by Japanese Funds-in-Trust (JFIT), is an integrated strategy, with six interrelated focus areas:

- **Education policy:** Building national capacity to develop appropriate policies and plans for the integration of ICT into education.
- **Teacher education:** Building the capacity of teachers to utilize ICT to improve teaching and learning.
- **Teaching and learning:** Facilitating the use of ICT for developing and delivering educational content.
- **Non-formal education:** Supporting the use of ICT for bringing quality education to out-of-school youth and adults.
- **Monitoring and measuring change:** Developing performance indicators to monitor and measure the impact of using ICT in education.
- **Research and knowledge sharing:** Collecting, creating and disseminating information about the use of ICT in education.

Goal and Key Focus Areas



Projects

With the goal and six focus areas in mind, the ICT in Education programme has designed and implemented 17 separate projects since 2002. Ten of the key projects, eight of which are continuing, are listed in the table below.

Focus area	Ongoing and New Projects	Time-frame
Education Policy	<ul style="list-style-type: none"> • ICT in Education Policy 	2003 – 2008
Teacher Education	<ul style="list-style-type: none"> • Next Generation of Teachers • Training and Professional Development of Teachers and Other Facilitators for Effective Use of ICT in Improving Teaching and Learning <p><i>Sub-projects:</i></p> <ul style="list-style-type: none"> • Resources for Educators – Free and Open Source Software CD-ROM; Multimedia CD-ROM; Web Tools for Educators CD-ROM. • Case studies: Using ICT in Teacher Education. 	2006 – 2008 2003 – 2007
Teaching and Learning	<ul style="list-style-type: none"> • UNESCO SchoolNet: Strengthening the Use of ICT in Schools and SchoolNets in the ASEAN Context 	2002 – 2007
Non-formal Education	<ul style="list-style-type: none"> • ICT for Community Empowerment through Non-formal Education 	2002 – 2007
Monitoring and Measuring Change	<ul style="list-style-type: none"> • Performance Indicators on ICT Use in Education 	2002 – 2007
Research and Knowledge-Sharing	<ul style="list-style-type: none"> • Regional Clearinghouse in Support of the ICT in Education Programme • ICT in Education Capacity Building • Innovative Practices in the Use of ICT in Education • ICT in Education Knowledge Communities 	2002 – 2007 2007 – 2008 2007 – 2008 2006 – 2008

Geographic Range

These projects are being implemented across the Asia-Pacific region. The map of the region, below, indicates the countries in which the projects have been implemented so far.

The Asia-Pacific Region



Colour Code	Project Type	Countries Involved in the Project(s)
Gold	Policy	Afghanistan, Australia, Bangladesh, Brunei Darussalam, Cambodia, China, Cook Islands, Federated States of Micronesia (FSM), Fiji, India, Indonesia, Japan, Kiribati, Lao PDR, Marshall Islands, Malaysia, Mongolia, Myanmar, Nauru, New Zealand, Niue, Pakistan, Palau, Papua New Guinea (PNG), Philippines, Republic of Korea, Samoa, Solomon Islands, Singapore, Thailand, Tokelau, Tonga, Tuvalu, Vanuatu, Viet Nam
Red	Training of Teachers	Cambodia, China, India, Indonesia, Kazakhstan, Lao PDR, Malaysia, Mongolia, Philippines, Sri Lanka, Thailand, Viet Nam
Blue	Teaching and Learning	Bangladesh, Bhutan, Cambodia, Indonesia, Malaysia, Philippines, Thailand, Cambodia, Lao PDR, Myanmar, Nepal, Viet Nam
Orange	Non-formal Education	China, India, Islamic Republic of Iran, Indonesia, Lao PDR, Philippines, Sri Lanka, Thailand, Uzbekistan, Viet Nam
Green	Monitoring and Measuring Change	India, Philippines, Thailand. Results are disseminated and used by all countries in the region.
-	Research and Knowledge-Sharing	Information is collected from, and disseminated to, all countries in the region (and beyond).

Using ICT in education: benefits and conditions

Developments in ICT are making information-exchange faster, easier and more cost-effective. These changes have brought about improvements in speed and modes of communication in recent years and are resulting in significant changes in the way we live and work.

Of particular interest to educators is that when used effectively, **ICT offer the potential to:**

- **Make education more accessible**

Using ICT can make education increasingly free of the constraint of distance, and make education easier and cheaper to access.

- **Improve the quality of education**

Use of ICT can change the ways we teach and learn – to bring about better learning outcomes.

Why use ICT as a tool in education?

Using ICT effectively in education can help to improve the reach and quality of education.

In particular, ICT can:

- Expand educational opportunities by making education available anywhere, anytime and to anyone.
- Improve learning outcomes by making learning more interactive and getting learners more involved in the subject matter.
- Improve motivation to learn by improving relevance of content and making learning more fun.
- Enable education to be tailored to individual learning needs and abilities.
- Enable locally relevant teaching materials, in local languages, to be created and disseminated quickly and affordably.
- Facilitate technology-skill formation, team-work abilities and other “21st century skills” among learners.
- Bring about pedagogical improvements and learner-centred teaching.
- Provide conditions that permit and promote lifelong learning.
- Increase the effectiveness and efficiency of education planning and delivery.

Examples of how ICT can be used in education:

- Educators and learners can use local television programmes (in local languages) and videos to enhance understanding of current affairs, culture, science and other subjects.
- Educators and learners can use digital cameras to prepare their own content and learning materials. See: www.unescobkk.org/index.php?id=6885
- Administrators can use computer-based Learning Management Systems to deliver e-learning courses and manage student learning.
- Organizations can produce and broadcast educational radio programmes in local languages. For example, in Kazakhstan, a project called "Silk Radio" led to the creation of an ongoing soap opera (story) in the local language, dealing with topical issues, including health and community issues. www.unescobkk.org/index.php?id=1226
- Teachers can use the Internet in project-based learning and for web-quests. See: www.unescobkk.org/index.php?id=pbl_ict
- On-line Web 2.0 communication tools, such as Skype, Blogs, Wikis and Forums, can be used by educators and students to gain information and to form networks with other students, teachers, schools, subject experts and communities. These tools can also be used for online professional development and to enable students to improve their reading and writing skills. See: www.unescobkk.org/index.php?id=5323

Conditions for effective use of ICT in education

The right conditions need to be in place, however, before the educational benefits of ICT can be fully harnessed.

Conditions include:

- Political and financial commitment (at both government and school levels).
- Conducive policy and careful planning for integration of ICT into education.
- Adequate infrastructure (including alternatives to conventional infrastructure such as wifi and solar power).
- Equipment and ICT tools (such as desks, chairs, radios, televisions and computers) that are appropriate for local needs and are affordable in the long term.
- A system of ongoing professional development for teachers.
- Enthusiastic teachers, equipped with the skills required to make good use of ICT tools for enhancing education.
- Appropriate curricula that permit the use of ICT in teaching and learning.
- Institutional flexibility and monitoring and assessment systems.
- Adequate and timely technical support (trouble-shooting, maintenance and repair of equipment) in schools and learning centres.



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Using ICT in non-formal literacy education.



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School children in the Republic of Korea using ICT in class.

Partnerships

The ICT in Education programme has so far been largely funded by Japanese Funds-in-Trust (JFIT). The contribution made by JFIT has been a key factor in enabling the ICT in Education projects to achieve their objectives, and JFIT has thereby made a meaningful difference in terms of achieving the long-term goal of *harnessing the potential of ICT towards achieving quality education for all in the Asia-Pacific region*.

The ICT in Education programme welcomes new partners to take part in enabling the implementation of activities that will lead to enhancing the quality of teaching and learning in the Asia-Pacific region, as well as to our wider goals of contributing to achieving the Education For All goals and to reducing the digital divide.

With a broad base of support, the ICT in Education programme will not only be in a position to continue its activities but will be able to develop new approaches and strategies. This support is needed now, so as to reach Education for All targets by 2015 and reverse the current trend: a widening digital divide.

For information on how your company, organization or institution can participate in achieving the stated goals, please refer to the table below and contact the Head of the ICT in Education section at ictinfo@unesco.org.

HOW YOU CAN PARTICIPATE	
<p>Your contribution is invaluable in enhancing the quality of teaching and learning through ICT. Organizations and individuals are welcome to become involved in the programme in general or in particular projects relating to their area of interest, knowledge or experience.</p> <p>Below are some suggestions on how you can become involved.</p>	
<p>Private and public sectors and philanthropic organizations</p>	<p>Financial contributions will enable the ICT in Education programme to sustain its activities and plan for the future.</p> <p>Donations of equipment, materials and services will assist the programme in achieving specific project objectives.</p> <p>Sharing of information, knowledge and expertise will facilitate project implementation.</p>
<p>Teachers and Teacher Training Institutions</p>	<p>Active involvement in the on-line forum and collaboration with other teachers will result in greater exchange of knowledge and experiences, thereby assisting the integration of ICT into education in the region.</p>
<p>Learners</p>	<p>Sharing of information about the benefits of integrating ICT in education with your teachers, educational facility, community and local decision-makers, will encourage greater integration of ICT into education systems in the Asia-Pacific region.</p>
<p>Press/Media</p>	<p>Informing decision-makers, teachers and learners about the potential of ICT to improve teaching and learning will assist in raising awareness and bringing about change in governments, schools and institutions.</p>



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A child in Viet Nam playing an educational computer game.



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Teachers participating in a training workshop in Thailand.



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