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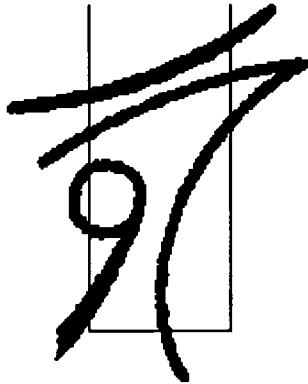
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## ABSTRACT

This booklet examines new learning technologies' place in providing opportunities for the democratization of education, for enhancing learner-centered flexibility, and for reaching out to unserved communities. It also raises questions as to who controls technology, and why, how, and for whom the technologies are being used. The booklet concludes that the main problem in the development of new technologies is not whether they can be used but how to ensure wide access to information. Recommendations made by workshop participants include the following: (1) governments should not reduce their support for social and cultural public services; (2) all countries should be not merely consumers but also producers of software; (3) software and courses should reflect national and local identities as well as cultural requirements; (4) new technologies and conventional ones should be integrated; and (5) the dissemination and use of information technology should be open to public debate. (KC)

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**CONFINTEA  
HAMBURG  
1997**

A series of 29 booklets documenting workshops held at the Fifth International Conference on Adult Education

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## 7a New information technologies

New information technologies:  
a key for adult learning?



This publication has been produced by the UNESCO Institute for Education within the context of the follow-up to the Fifth International Conference on Adult Education (CONFINTEA V), held in Hamburg in 1997.

Readers are reminded that the points of view, selection of facts, and the opinions expressed in the booklets are those that were raised by panellists, speakers and participants during the workshop sessions and therefore do not necessarily coincide with official positions of the UNESCO or of the UNESCO Institute for Education Hamburg. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the UNESCO Secretariat concerning the legal status of any country or territory, or its authorities, or concerning the delimitations of the frontiers of any country or territory.

### Theme 7: Adult learning, media and culture

Booklets under this theme:

7a New information technologies: a key for adult learning?

7b Museums, libraries and cultural heritage:

democratising culture, creating knowledge and building bridges

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## Foreword

In July 1997 the Fifth International Conference on Adult Education was held in Hamburg, organised by UNESCO and in particular the UNESCO Institute for Education, the agency's specialist centre on adult learning policy and research. Approximately 1500 delegates attended from all regions of the world, with representatives of 140 member states and some 400 NGOs. In addition to the work of the commissions and plenary which debated the official documents of the Conference The Hamburg Declaration and The Agenda for the Future, there were 33 workshops organised around the themes and sub-themes of the Conference.

As part of its CONFINTEA follow-up strategy, the UNESCO Institute for Education has produced this series of 29 booklets based on the presentations and discussions held during the Conference. The recordings of all the workshops were transcribed and synthesized over one year, edited, and then formatted and designed. A tremendous amount of work has gone into this process. Linda King, coordinator of the monitoring and information strategy for CONFINTEA, was responsible for overseeing the whole process. Madhu Singh, senior research specialist at UIE, undertook the mammoth task of writing almost all the booklets based on an analysis of the sessions. She was helped in the later stages by Gonzalo Retamal, Uta Papen and Linda King. Christopher McIntosh was technical editor, Matthew Partridge designed the layout and Janna Lowrey was both transcriber and translator.

The booklets are intended to draw out the central issues and concerns of each of the CONFINTEA workshops. They are the memory of an event that marked an important watershed in the field of adult learning. We hope that they will be of use both to those who were able to attend CONFINTEA V and those who were not. We look forward to your comments, feedback and continuing collaboration with the UNESCO Institute for Education.

Paul Bélanger,  
Director, UNESCO Institute for Education, Hamburg  
and Secretary General of CONFINTEA

# New information technologies: a key for adult learning?

## Introduction

The introduction of new technologies into adult education necessitates both a rethinking of traditional relationships and the development of new ones amongst learners, educators, adult education organisations, local and national governments and the many other stakeholders in the field.

Five panellists, representing the key stakeholders, different regions, and levels of technological development, presented their views at the workshop on "New Information Technologies for Adult Learning" at the Fifth International Conference on Adult Learning in July 1997 in Hamburg. The panel consisted of Mamadou Ndoeye, Minister of Education, Senegal; Lalita Ramdas, International Council of Adult Education (ICAE), India; Rafael Roncagliolo, World Association of Community Radios, Peru; A. P. Hardhono, Media Research Centre, Indonesia; Eero Pantzar, Department of Education, University of Tampere, Finland. The workshop was chaired by Pauline Marois, Minister of Education, Quebec, Canada.

In preparation for this working group session, three informal meetings were held on the potentials and limits of new information and communication technologies, including an evaluation of the virtual seminar carried out in March 1997.

The cultural revolution driven by communication and information technologies was seen as an opportunity for the democratisation of education, for enhancing learner-centred flexibility and for reaching out to un-served communities.

But at the same time it was felt necessary to raise questions as to who controls the technology, and why, how and for whom the technologies are being used.

New approaches to the implementation of technologies in adult learning are needed in areas which include access, content, respect for different cultures, languages, copyright and self-learning approaches.

## Access to new information technologies

Information and communication technology is a powerful tool to increase every citizen's power to have access to information and new forms of education. It can also enrich the learning environment.

At the same time, new technologies reinforce social disparity. The use of the Internet and other information technologies continue to be dominated by persons with higher education and income, because equipment is often unavailable to the others and because there is still widespread technological illiteracy.

Many developing countries are nonetheless experimenting with information and communication technologies and evolving new open learning systems.

Questions are also being raised concerning virtual classrooms. Who will produce and deliver the learning materials? Who is to decide on their contents? How can we ensure that people have the possibility of accessing, understanding and becoming familiar with the culture of new technologies from an early age? What conditions could assist in the introduction of information technology in rural and remote areas to help integrate these communities?

Concentration of ownership and a monopoly on information and communication technologies may hinder cultural diversity. Concentration of ownership may upset the fragile balance between holders of intellectual property rights and users of that information. Access to information content is also threatened. Information programmers and analysts are charging prohibitive prices for software which many countries are unable to afford. The widespread adoption of software is further hindered by legal statutes.

"Why suddenly is there a renewed interest in trying to propagate sudden concern that have-nots who barely have access to a school or to drinking water or to shelter must suddenly have access to information technology... it is important to look at some of these underlying assumptions. Because the market is not necessarily idealistic and innocent. Because over the last three decades we have been at the receiving end of a lot of outdated technology, which the developers of that technology cannot absorb. Can really mere technology and the kind of access to information in itself address the issue of poverty?"

Lalita Ramdas, ICAE

## Cultural issues

If the information highway becomes widely accessed without sufficient national input, then it may serve as a one-way channel for disseminating the values, languages and cultural norms of the industrialised nations. Even these countries face tremendous challenges to make sure that the content satisfies the cultural needs and realities of their societies and its minority groups.

If every adult learner is to have adequate access to the required knowledge, then new communication technology and media need to take into account the following factors in the preparation of content and course material for educational programmes:

- indigenous and vernacular knowledge must be valued and used along with relevant exogenous knowledge – acquired beyond the local community;
- international and national strategies for promoting the use of new technologies and media in adult learning must take into account the diversity and integrity of language and culture, and support local and vernacular content;
- international organisations and national agencies – both profit making and non-profit making – must find ways to support the development of learning resources that increase the diversity of learning/teaching materials;
- ways should be found to integrate libraries, museums and cultural centres into learning programmes using the new technologies and media;
- other languages, besides English, must be given public and private space to promote their content and culture.



## Distance education

Millions of adults in all parts of the world take distance education courses each year. One can quote numerous examples of small distance education projects, often based on a virtual classroom model, that use new communication technologies – open secondary schools, open colleges and correspondence programmes. However, only a small minority of adults undertaking distance education courses have access to “new information technologies” such as a PCs with Internet access.

### The Indonesian Open Learning University

82 per cent of the persons at the Indonesian Open Learning University are adults of the age 30 years and above.

The Indonesian Open Learning University consists of:

- radio programmes of 25 minutes each at 10 p.m. Indonesian time;
- television programmes four times a month, 25 minutes long, at 11 p.m.;
- 20 computer assisted instructional programmes for students who have access to the Internet;
- communication between learners and the lecturers; counselling through email;
- a network of services with 32 regional offices for learners to register for adult education programmes;
- 330 supervised examination sites;
- a communication and information technology infrastructure;
- satellite educational programmes for the general public;

Many of these programmes have to deal with problems of cost. The other problem is access: only 60,000 adults out of 200 million people have access to the Internet.

There are three broad types of usage of open distance learning systems:

- 1 for delivery of supplementary study materials to facilitate independent study;
- 2 as a "stand alone" direct educational intervention;
- 3 for complementary inter-personal communication and learning support.

Open learning systems address key issues not adequately addressed by conventional systems:

- learner-centred pedagogy, flexible in time and space;
- accessibility in remote areas,
- use of local community services;
- recognition of non-formal and informal learning processes.

The costs of high quality learning materials for distance education programmes (print, audio-visual, CD-ROM kits) can be kept low provided they are reused over several years by large numbers of adults on a given course. However, people involved in course material development and design are not necessarily the educators. The question therefore arises: How can communication technologies be used to bridge this gap between the designers and developers of course material on the one hand and the tutors on the other?

Although teachers and learners in distance education are usually separated in time and space, nearly all distance education programmes have an element of face to face contact through para-professionals. Such learner support includes counselling, advice, special registration, flexible tuition, monitoring assessment and accreditation of informal learning.

Distance education is diverse and is usually based on a combination of technologies, making use of whatever is available and accessible to learners. In rural areas of many poorer countries, post, radio, satellite and television are used for transmitting educational programmes. Sometimes non-educational distribution networks for soft drinks are used to deliver print materials.

However, the mere use of technologies does not guarantee that learning will occur. Learning depends on the motivation of learners, on orientation, on the prior acquisition of learning skills, as well as on the competency of professional developers and the quality of local tutors.

In planning and developing study programmes for distance learning many questions have to be addressed: Who is the target? What are the conditions under which he lives? How can he or she study? What kind of media can be used to support learning? How can the participants be helped to become independent learners, taking responsibility for their own learning? How to organise interactive radio or TV instruction?

## New learning environments and the practice of adult education

The change in the learning environment is not just about providing adults with flexible learning opportunities and information services in the work-place and home. It is also about how adults participate in the information and communications technology, how information is used in this environment, how the local cultural infrastructure of museums, science centres and libraries is used, and whether written media are available.

The enrichment of the learning environment through Information and Communication Technology (ICT) depends on several factors:

- political and financial willingness to invest in new technology;
- up-to-date infrastructure, computers, data networks accessible to the public;
- information campaigns (e.g. the BBC campaign);
- suitability of teaching and learning materials for adults;
- more resources for households to spend on the Internet;
- networks providing opportunities for all adults to get familiar with ICT;
- partnership between educational institutions and cultural services.

Non-formal adult and popular educational media are good ways to prepare people for such a scenario. Conventional media, journals, radio and television are an essential part of lifelong learning environment. Researches have shown a greater faith in the information conveyed through radio and television both in formal and informal learning, than in the relatively unreliable knowledge conveyed through the Internet. However, the excessive speed of change tends to isolate individuals and fragment identities. It is therefore all the more necessary to look at technology, communication and information in an integrated way.

## New technologies and adult basic education

While new information technologies might help improvement in the quality of higher education, it has to be underscored that universal literacy and the spread of education, including post-elementary adult education, are a pre-requisite for information technologies to be an effective agent of social transformation.

New information technologies can offer learning opportunities complementary to and/or continuous with mass media, in particular, radio and television. These are being used in several parts of Asia and Africa to promote adult learning, to reduce the cultural barriers to participate in education and to disseminate information on the range of opportunities. The questions of importance here are:

- How can international bodies, governments and private organisations use both new and traditional communication technologies to provide the basic education needed by 900 million illiterate adults so that they can benefit from further opportunities for adult learning?
- How can those organisations ensure that basic education of adults recognises the holistic nature of learning and the advantage of combining health, agriculture, child welfare and social services with adult learning?
- How can literacy, information, skills and knowledge be used and thus sustained through the education system, the working environment, the local economy and the private sector?

## Policy implications

There are four criteria for policy makers for the use of technologies in education systems:

- 1 the choice of new technologies that are efficient for broadcast media, while at the same time allowing for interaction;
- 2 their integration into an overall educational strategy;
- 3 appropriation of these new technologies;
- 4 mastery of the tools by educational personnel.

The use of new technologies raises many problems that need to be solved in a manner appropriate to each context:

- insufficient attention to the interactive aspects of learning;
- alienation of the people from their everyday social life and local context;
- new technologies relying heavily on written communication; adults not being sufficiently prepared for new technology; technology not yet adapted to mass learning;
- lack of trained local mentors.

## Recommendations

The following recommendations were made by the workshop participants.

- Governments should not reduce their support for social and cultural public services such as public libraries and community centres as these are places which the poor use.
- All countries should be not merely consumers but producers of software and programmes.
- Relevant software, programmes and course development should reflect the national and local identities, as well as cultural and linguistic requirements of countries and local communities.
- It should be made easier for learners to choose the information they need for specific purposes.
- New technologies and conventional ones should complement one another and should be integrated.
- The dissemination and uses of information technology should be open to public debate.

## Conclusion

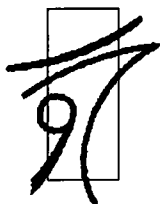
It is essential to invest in information technologies because of their great potential for communication and lifelong learning. These technologies can give learners of all ages greater autonomy and wider access to information.

We are in the middle of a true cultural revolution which will inevitably involve integrating technological innovations into education. In a few years' time most university students will have access to the Internet. The rate of growth of Internet users in Lima, for example, is 20 per cent monthly. The new Spanish telephone company and the TV business are prepared to offer cable television services to all cities, including the slum areas.

Though new communication and information technologies are developing globally, they also offer new opportunities for reinforcing local and national communications.

The prime question is therefore not whether new information technologies should be used in education, but rather how to ensure wide access and diversified production and transmission of information.

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The CONFINTEA logo, designed by Michael Smitheram of Australia, represents the lines on the palm of a hand. These lines are universal and yet different for each subject. They celebrate cultural diversity and the joy of learning.

## Theme 7

### Adult learning, media and culture

Booklets under this theme:

- a New information technologies: a key for adult learning?
- b Museums, libraries and cultural heritage:  
democratising culture, creating knowledge and building bridges





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