

Information Literacy in National Information and Communications Technology (ICT) policies: The Missed Dimension, Information Culture

Prof. Michel J. Menou
Department of Information Science, City University
London, United Kingdom

White paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy. See recommended bibliographic citation format at the end of the paper for use when quoting from or reproducing this paper.

Abstract

Most national and international development policies have now made ample room for the application of ICT and transition toward the information society. Within each country as well as among them, inequalities in access and use (usually referred to as “digital divide”) are seen as a major threat. In addition to securing “universal access,” information literacy is a major component of these efforts. A number of examples mostly drawn from Latin America illustrate the patterns in addressing information literacy issues. The emphasis upon use of computers and more generally the quite narrow perspective of these programs makes them look far more an exercise for “retooling” the workforce than empowering citizens. It is advocated that the potential of the Information Age cannot be realised without expanding the scope of information and computer literacy far beyond their usual, functional aspects. What is at stake is the formation of an information culture, which itself involves the adaptation of pre-existing cultures. In other words a cultural revolution assumed by the actors rather than a cultural involution pushed by the global media. In conclusion a few requirements for such a new course are outlined.

1. INTRODUCTION: TOWARD DIGITAL INCLUSION?

Ever since the landmark address of the former U.S. Vice President Albert Gore before the I.T.U. General Assembly in Buenos Aires, Argentina, the “new” society, based upon massive use in all activities of globally interconnected ICT applications has been presented as some kind of “N.I.I.rvana”—if I may say, reminding the influence of the U.S. National Information Infrastructure programmes upon the shaping of these millenarian views. Mr. Gore presented the “Global Information Infrastructure” as “an essential prerequisite to sustainable development for all members of the human family” (Gore, 1994). In his view the GII was to allow for achieving such ever wanted goals as:

- *“sharing of information,*
- *communicate as a global community,*
- *greater sense of shared stewardship of our small planet,*
- *strong democracies,*
- *better solutions to global and local environmental challenges,*
- *improved health care,*
- *to educate our children,*
- *robust and sustainable economic progress,*
- *a global information market place where consumers can buy and sell products,*
- *a global economy driven by the growth of the Information Age,*
- *opening markets.”*

The “international community” through its many multilateral organizations, national government agencies, international and national non-governmental organizations, has quickly endorsed this scenario. Advances toward the information society became subject of constant attention and a number of organizations and programs made its promotion the core of their business. Up to a point one may wonder if their proliferation is not some sort of “virtual” response to the desertification that can be observed in the real world. Dot Force, Digital Opportunity, IT Task Force, Dot Edu, Dot-you-name-it ... All these "dots" confusedly remind the noise of a poultry-yard.

Speaking of noise, it may not be superfluous to highlight at this point the wide variations in the designation of this new society: IT intensive, information, knowledge, learning, even intelligent society. Beyond semantic subtleties, one may possibly find in these variations articulate gradations in the representation of the present or anticipated state of the world. One may as well consider them as an illustration of the combined effects of marketing emphases and conceptual void. Not less revealing is the widespread appearance of the word “economy” where one would expect to find such words as “country,” “nation,” “State” or “people”—quite a departure from earlier historical expressions such as “Renaissance” or “Century of the Lights.” So, in this wave of modernity, “digital economies” are surging and their standing is to be measured after E-Readiness yardsticks.

1.1. Struggling with the “digital divide”

According to circumstances, ideologies or necessity, ICT are considered as a non-issue, a fetish, one particular sector, an ingredient to other sectors, an overall adjuvant to development, or a basic requirement. In any case, it seems that in the eyes of policy-makers there is no option but expand them rapidly since, as Kirkman, Sachs and Stone (2001) put it:

There can no longer be any doubt about the importance of every economy plugging into global information and communication networks. The new information and communication technologies, and the Internet in particular, have changed the rules of economic competitiveness. (¶ 2)

While ICT are spreading throughout the planet and in all areas of human endeavours, not to mention their yet covert intrusion into biology, at an unprecedented pace, the imbalance in their access and use becomes a central concern. This phenomenon commonly called, “digital divide,” after the U.S. language – and in spite of the fact that the notion does not translate well in other cultures (Courtright 2001)¹ – is attracting universal attention. National and international policy-makers are publicizing their commitment to eradicate it, and eventually support programmes to that end. As most policy issues, this one easily focalizes double talk and is fraught with misconceptions of all sorts. We discussed a number of these in an earlier paper (Menou, 2001a) stressing that:

The central point in the debate about the digital divide should not be what is the best way to bring ICT to the poor, but what is the best way for the poor to take advantage of ICT in order to improve their lot. (Threats and promises, ¶ 5)

One strength of that language is perhaps its homophony with “dividend” which is catching not less attention. A typical example can be found in the Digital Dividend project of the World Resources Institute (http://www.digitaldividend.org/action_agenda/action_agenda.htm) which introduces its goal to:

...bridge the global digital divide through business solutions that bring connectivity and digital services to unserved populations in developing region. Our main activity to advance this goal include: In-depth business case studies of potentially scalable, replicable digital dividend enterprises, documenting business models and key policy, infrastructure and other challenges. (¶ 1)

This may look a somewhat simplistic approach, especially if one reminds that Horton (1995) placed socio-cultural issues on top of the list of the key issues that “policy-makers can expect to confront” (pp. 21-24) when dealing with information superhighways. Under this heading he mentioned the basic societal character of the cyberspace, linguistic and cultural barriers, information and social change towards virtual environment, access to information, defining basic services, the relationships between entertainment, news and education, professional responsibility and accountability. Information literacy itself was mentioned under issues in the use of information as a merely functional aspect.

1.2. The digital divide among the other divides

Table 1 below can illustrate the extension and complexity of the phenomenon. We would be the last one to look for straight correlation between pairs of these data. They only present in our view a very rough illustration of the fact that the level of “informationalization” is dependant from a complex conjunction of factors. It shows the ranks of countries on the basis

¹ For instance the French language « la fracture numérique » is more evocative of hot arithmetic or broken calculating machines.

of the percentage of their population connected to the Internet² in the first column and their respective indices on the Human Development, Gross Domestic Product and Educational Indices (UNDP, 2001). None of the indices seems to be aligned with the percentage of population online. More wealth, as expressed by GDP Index does not necessarily result in more connectivity, as shown by the respective cases of Argentina and Brazil, or Barbados and Belize. Nor does more education, as shown by the respective cases of Chile and Brazil or Costa Rica and Panama. Nor does a better overall human development, as shown by Venezuela and Colombia. Costa Rica may be one exception since it ranks first on all criteria in its sub-region. But Costa Rica is also an exception in almost any other respects, would it be only for being the country which has neither an army nor defense spending. It may well be that one day a “vibrant market” or the number of credit cards will be considered the best indicator of “informationalization” and thus of information literacy. Even though one will then be talking of a different kind of connectivity.

Digital inclusion policies are geared in first place, as is logical, at enforcing effective universal access to the infrastructure. The concept of basic services is highly related to income levels. High society in the Silicon Valley feels miserable without broadband, and many villagers in the Andes don’t have even a public phone. Whether they include or not the Internet is still subject of controversy and requires some pressure, as shown for instance by the Papallacta Manifesto ([Somos@Telecentros](#), 2000).

ICT infrastructures more than any other ones are useless if they cannot be served by skilled operators and meet a public with the skills required to use them. The second major concern of ICT policies is thus naturally human resources, with, as we will see, infinite variations in their approach and uneven practical commitments.

Table 1: Population connected and selected development indices in Latin America and the Caribbean

Country	% of Population connected	HD Index	GDP Index	Education Index
South America				
Brazil	16,96	0,750	0,71	0,83
Chile	11,16	0,825	0,74	0,90
Uruguay	11,10	0,828	0,75	0,92
Argentina	6,76	0,842	0,80	0,92
Venezuela	4,04	0,765	0,67	0,83
Mexico	2,70	0,790	0,74	0,84
Colombia	2,21	0,765	0,68	0,89
Peru	1,50	0,743	0,64	0,86
Ecuador	1,39	0,726	0,57	0,86
Bolivia	0,98	0,648	0,53	0,80
Paraguay	0,36	0,738	0,63	0,83
Central America				
Costa Rica	6,74	0,821	0,75	0,86
El Salvador	1,65	0,701	0,63	0,73
Panama	1,60	0,784	0,68	0,86
Honduras	0,64	0,634	0,53	0,70
Guatemala	0,51	0,626	0,60	0,62

² Based upon 1999 or 2000 data from ITU, in most instances, as they can be found on http://www.nua.com/surveys/how_many_online/index.html visited 15th February 2002.

Nicaragua	0,42	0,635	0,52	0,66
Caribbean				
Belize	6,20	0,776	0,65	0,80
Bahamas	4,44	0,820	0,84	0,89
Trinidad & Tobago	2,55	0,798	0,74	0,84
Jamaica	2,26	0,738	0,60	0,78
Barbados	2,19	0,864	0,83	0,90
Suriname	2,00	0,758	0,62	0,89
Guyana	0,43	0,704	0,60	0,87
Dominican Republic	0,30	0,722	0,67	0,79
Haiti	0,09	0,467	0,45	0,50

2. SOME EXAMPLES OF INFORMATION LITERACY COMPONENTS IN ICT POLICIES

In view of the rather unique level of push by the “international community” in this matter, it may be appropriate to begin with a look at the perspective offered by the G8 DOT Force. Among the 9 Action Points it proposed in its Genoa Plan of Action, the third one is entitled “Enhance Human Capacity Development, Knowledge Creation and Sharing ” (DOT Force, 2001, p. 15-16). The proposed actions include:

a) Promote and support ICT dissemination among the children of the developing world – whether in school or not, with special attention paid to girls - and urge the non-profit and private sectors as well as developing country governments to scale up their efforts in wiring educational facilities and ensuring adequate teacher training;

b) Enhance the training of teachers on ICT and the “digital literacy” of pupils. Effective measures should be identified to enhance the use of the Internet to improve the performance of staff, teachers, pupils and students in schools and the universities, and for distance learning programmes; e-Learning should conversely be considered as a powerful tool to enable all types of education and training;

c) Expand opportunities for training, education and knowledge sharing for people living in rural and remote areas through distance learning;

d) Give special attention to disenfranchised and illiterate people (particularly youth and women), through innovative partnerships to disseminate knowledge and skills using ICT;

e) Support the interconnection of education and research networks among developing countries and industrialized countries, for instance through high-speed networks, twinning or bandwidth pooling;

f) Support university-based “networked centers of excellence” focusing on research and learning at the intersection between ICT and development. Individual centers could be geared toward technology, applications, entrepreneurship, training senior decision makers in both the public and private sectors in ICT regulatory and policy areas, and other aspects of a knowledge-

based economy. These centres could also provide teacher training, as well as training to senior decision makers in both the public and private sectors in the areas of regulatory and ICT policy; vocational and lifelong training should receive particular attention; centers in developing nations would be “twinned” with those in G-8 nations; a public-private consortium model could be considered;

g) Enhance the e-Awareness of senior policy makers with a particular accent on the benefits of e-Governance for enhancing democracy, transparency and government accountability;

h) Encourage companies worldwide to offer a portion of the working time of their skilled human resource base to training developing country civil society in ICT-related subjects;

i) Promote initiatives in the field of cyber-mentoring, for example enabling the international business community to provide advice and counsel remotely to local entrepreneurs in developing countries.

2.1. Examples of information literacy in large-scale information society programs

In Brazil, the “Green Book” which presents the national Information Society Programme offers a strikingly comprehensive vision:

Nesse sentido, é imprescindível promover a alfabetização digital, que proporcione a aquisição de habilidades básicas para o uso de computadores e da Internet, mas também que capacite as pessoas para a utilização dessas mídias em favor dos interesses e necessidades individuais e comunitários, com responsabilidade e senso de cidadania.³ (Takahashi, 2000, p. 31)

The programme component related to the extension of universal services among citizenry is contemplating such actions as promoting computer literacy with free learning material, courses and certificates, use of the volunteers’ service, establishment of community centres (to be raised from an initial 1000 to 5500), set up a network to assist people with disabilities through the community centres. A number of additional measures are contemplated, including the development of cheap network computers and TV-set top boxes. Other components of the programme especially those dealing with education on the one hand, and contents and cultural identity on the other hand, are directly addressing issues related to information and computer literacy.

In Argentina, under the former de La Rúa administration, the Information Society Program took a more comprehensive perspective than is common. It referred to Universal Access and ability to take advantage of ICT as a means to achieve human development goals in general:

El PSI aborda el tema de la capacitación y el uso específico en la materia como un tema central para la salida de la exclusión social originada por el desempleo y el analfabetismo estructural (educación y capacitación continua). Se ha tomado la exclusión, conceptualmente, como un proceso social y a los excluidos no como

³ To this end it is indispensable to promote computer literacy, so that the basic skills for the use of computers and the Internet are imparted, but also in order to equip people for the use of these media in the service of their personal and collective interests and requirements in a responsible fashion and with a sense of citizenship.

grupos de personas pertenecientes a una clase, geografía o categoría. (PSI, 2001, p. 25)

This not only resulted in a plan for the establishment of thousands of community centres throughout the country, but in the twining of basic computer literacy with other training programmes geared at a broad range of professional and social requirements. Unfortunately the implementation of the program was hit by the political and financial crisis that affected this country. Its effective continuation cannot be predicted at the moment.

In Venezuela the proposed National Plan for Information Technologies (Ministerio de Ciencia y Tecnología, 2000) is also emphasizing the key role of human resources, taking a rather comprehensive perspective on the issue. While the Brazilian and Argentinian documents are dealing with the role of the educational sector separately, in this case it is presented as part of the computer literacy efforts; this however may be a matter of overall organization of the preparatory work and the document itself. The objectives contemplated include:

- “ Fomentar la **formación de recursos humanos en TI para diseñar, instalar, operar y mantener la PNTI**, así como para apoyar a los especialistas que desarrollen las aplicaciones y la creación de contenidos de información a todo lo largo de esta infraestructura.
- Articular las diversas iniciativas en TIC con las **políticas educativas del estado** con la finalidad de, a mediano y largo plazo, poseer una población bien informada y educada que como un todo sea una generadora de personas activas y consumidoras de nuevo conocimiento e información (con especial énfasis en la formación de técnicos e ingenieros en TIC).
- Desarrollar un **programa masivo de introducción y uso de las TIC en todos los niveles y modalidades del sistema educativo nacional** público (educación formal y no formal): introducción de computadoras, multimedia y educación a distancia.”⁴

2.2. Examples of information literacy in universal access programs

In Colombia, the Massive Access to Information, whose acronym, MAI⁵, might remind other not so fortunate endeavours, seeks to support the establishment in small and medium towns of Internet access facilities. The training effort is in first place geared at the managers and staff of these entities . But it is also, directly or indirectly, targeted at the users and covers:

“Capacitación en el manejo de Internet, y herramientas de creación de documentos de: texto, hoja electrónica, presentaciones y páginas de internet”⁶ (Compartel AMI, 2002).

⁴ Promote the education of human resources in IT for the design, installation, operation and maintenance of the PNTI [national IT Platform], as well as support to the specialists who develop the applications and the creation of information contents throughout this infrastructure. Articulate the various ICT initiatives with the educational policies of the State with the objective to have in the medium to long term well informed and educated population that as a whole will be creating active people, consumers of new knowledge and information (with particular emphasis on the education of ICT technicians and engineers.

Develop a massive programme for the introduction and utilization of ICT at all levels and in all modalities of the national public education system (formal and informal education): introduction of computers, multimedia and distance education.

⁵ MAI - Multilateral Agreement on Investments, a temporarily aborted OECD initiative

⁶ Training in the use of the Internet and tools for the creation of documents: text, spreadsheet, computer presentation and Internet pages.

A somewhat similar programme is under way in Peru for the Stations for Public Access to the Internet in District capitals (OSIPTEL, 2002). Four modules are considered: infrastructure, contents, training and management. The training module, as currently designed:

Comprende la capacitación en un nivel técnico básico del administrador de la cabina, y de cierto número de usuarios del servicio, con el objetivo de incentivar su eficiente y adecuado empleo como medio de acceso al universo de la información. El número de usuarios a ser capacitados será proporcional al número de pobladores de cada capital de distrito.⁷

One cannot oversee that this formulation seems to focus on the full utilization of the equipment rather than the qualification of the people.

This approach of ensuring a minimal training in computer literacy and searching for information on the Internet can also be found in the Infocentros network in El Salvador. It is amusing to see this endeavour presented as one of these “best practices” business cases by the World Resources Institute in its Digital Dividend programme, as well as by other international development organizations, with an ambiguous reference to the Learning society strategy (for a description of it see for instance Courtright, 2001 and www.conectandonos.org.sv) of which it is assumed to be a continuation. As a matter of fact, Infocentros is applying a top-down business strategy which has nothing in common with the progressive and participatory process envisioned by the participants in Conectandonos (cf. Courtright, 2001). Established or forged reputations when they meet mainstream interests might be stronger than realities.

3. TOOLING THE HUMAN COMPONENT OF THE "LEARNING SOCIETY"?

From the examples above, one may try and draw a panorama of the information literacy component of ICT policies in Latin America.

In most instances a broad and inclusive perspective is presented as a rationale for the proposed policies. They appear to be in line with most public discourses and scholarly analyses. For instance the Tokyo Resolution (Horton 1995, p. 39) that formed the charter of the “Global Information Alliance” mentioned in the 4th item of its preamble:

Societal improvements require a deeper and widespread understanding of how to find and use authentic information properly. Universal literacy, lifelong learning, education and training are essential to these improvements.

It is too early to find empirical evidence of the actual implementation of these programmes and their effects. It will be interesting to see how much has actually gone into building IT infrastructures versus information literacy. Precedents such as the French “Informatique pour tous”⁸ programmes call for some circumspection. The tension, to use an understatement, between the emphasis of justification and the content of the plans is often intriguing. This is

⁷ Includes the training at a basic technical level of the operator of the station and a certain number of users with a view to encourage its efficient and appropriate use as a means for the universal access to information.

The number of users to be trained will be proportional to the size of the population in each district capital.

⁸ Computers for all, a programme of the Ministry of education in the 80's that was supposed to support basic computer literacy but eventually used as a means to locally expand computer infrastructure.

however an universal phenomenon which can for instance be observed in the case of the U.K. where:

As defined by government and CBI⁹, a 'Learning Society' is one that systematically increases the skills and knowledge of all its members to exploit technological innovation and so gains a competitive edge for their services in fast-changing global markets. This requires a workforce that is computerate rather than merely functionally literate and numerate, as was needed for the first industrial revolution. (Ainley, 2002)

3.1. "Computeracy" for all

The first objective in all cases is the formation of a body of IT specialists capable of operating the infrastructure, and secondarily act as trainers for the users. Whether their training programmes will actually include the kind of instruction required to properly perform that role remains to be seen. There is a serious risk to see a generalization of the "users' manual syndrome" that is machine explanations for machines likely to be guessed by ordinary human beings. The second objective is computer literacy among a "significant" fraction of the users population so that they can use stand alone computers, use computer networks, primarily the Internet, use basic applications such as word processing, spreadsheet, electronic mail, and possibly more advanced ones such as presentations, production of Web pages, construction of Web sites, use of digital multimedia equipment and programmes. All this is primarily oriented toward the use of the machines, and secondarily toward the use of information resources that can be found on the Internet. The production of local information by the "users" themselves is eventually contemplated. How far and well it is actually dealt with depends to some extent on the organizations that will be in charge as well as the conditions of implementation of the programmes. In a number of instances they are implemented through partnership with the private sector, or even as private sector ventures.

3.2. Support of Community centres and schools

Another interesting aspect is the role generally devoted to community centres or telecenters in these computer literacy efforts. This is to some extent replicating the U.S. experience with the C.T.C. but the wide spectrum of social movements and institutions in Latin America makes the panorama of these endeavours far more diverse as can be seen a recent report (Fundación Chasquinet, 2002). Many plans do also include networking and Internet access of schools and public libraries, to serve as access points for the public as well as resources for computer and information literacy.

In addition efforts toward the incorporation of ICT into the educational programmes of all kinds are a compulsory feature of ICT policies. As are the objections of the teachers' unions, if not the entire corporation that "things are not so simple" and the introduction of ICT should go along an adaptation of the content and methods of instruction, based upon a thorough appraisal of their goals and conditions. To what they add, again not without reason, that in order to use these tools and possibly new pedagogy they have to be themselves trained accordingly. The number of schools connected to the Internet or going to be connected by the end of the mandate seems to be perceived by politicians in all countries as a very significant

⁹ Confederation of British Industry

achievement and meaningful signal of modernity and dedication given to their constituencies. This may be only the beginning of a longer journey.

3.3. And “scientific management”

As is natural in sound management practices, the ICT programmes try and set quantitative objectives. It seems for instance that a decent national plan should have a provision for some 1000 to 5000 telecentres set up over a 4 to 5 years period. We also see now standard configurations for these centres based upon the total population of the considered area. In some cases it will be said that the number of Internet users is going to be doubled, 5000 IT engineers be graduated, online services to small and medium enterprises will increase by 20%, etc. It would be most enlightening to figure out what are the actual bases for these objectives. Except for the national pride of having the largest number of Internet users, one may wonder if any of those targets have an empirical justification beyond mere guesswork and bargaining rhetoric. As a former F.C.C. chief economist noted, it is often striking to observe in meetings of high level decision-makers on telecommunications policies that no one seems to have a clear idea of what he/she talks about; but eventually a solid basis for the decision, e.g. about the percentage of the market which is not creating a dominant situation, would have later on to be presented in court and that may be another story (Faulhaber, 2001).

The reader will have noticed that in all the above traditional literacy and even information literacy, in its “pre-Internet” sense seem to have vanished. Some would argue that learning how to find information on the Internet, how to use search engines, how to navigate in a digital library are all but new forms of information literacy. Fair enough. At least if this is not done from a portal of “most useful sources” and other pre-digested guides. However the risk of generalizing a judgement that “it is true because I’ve seen it on the Net” such as we had before the same justification for “as seen on TV,” “as heard on radio,” “was in the newspaper,” “the priest, schoolmaster, doctor, shaman, etc. told us.” As a matter of fact in many ICT endeavours, the “I” and “C” are grossly overlooked in favour of the “T.”

4. "IF IT IS A MAN": EDUCATION IS MORE THAN SKILLS ACQUISITION

The title of Primo Levi’s famous novel which introduces this section is meant to stress that even in the worst possible situation, humanity, and more generally life, until it is modified by genes and biochips, is not likely to lend itself to mere objectification. The central role of culture has been stressed for a long time when considering the relationship between human beings and information. The “inferior” performance of various societies in this area, especially with regard to the development of the formal information sector, has been blamed upon an inappropriate culture. In the case of Latin America, this can be summarized by Páez Urdaneta’s (1990, p. 23) observation of a “Débil actitud cultural hacia el valor de la información para el crecimiento personal y el desarrollo social.”¹⁰

4.1. Culture versus information society: true and false dilemmas

These influences were however difficult to demonstrate in a scientific fashion. They were mostly publicized as the core of polemical discourses, especially in Latin and African societies. In spite of their exploratory nature and limited scope, the work of Straub and co-

¹⁰ A weak cultural attitude with regard to the value of information for individual growth and social development.

workers (2001) has been able to demonstrate that cultural factors were playing a significant role in information technology transfer in the Arab world. In a West African context, Anandarajan and co-workers (2002), using a different statistical analysis technique have also shown the importance of cultural factors in the acceptance of microcomputer technology. The latter study further stresses that this influence is not by itself determinant and operates through complex interactions with other factors.

“Informationalization,” or massive use of ICT, has often been considered as a threat to traditional culture, in part through the domination of the English language it was supposed to facilitate. On the one hand established cultures are undermined, if not facing disappearance, on the other hand a “new” culture, whose expression is embedded into ICT is emerging, which needs to be attuned to the former at the same time the advantages of technology should be harnessed in support of the two. This antagonism was evident in early studies such as those assembled by Gallouedec-Genuys and Lemoine (1980). Information literacy policies reflect this ambivalence in many instances. While acknowledging the deep-rooted and complex nature of culture, they tend to stick a functional layer of ICT fitness over a cultural body which is otherwise subject to a mixture of elitist protectionism and reverence on the one hand, and abandonment in the midst of the competition between the commons and Universal® commoditization on the other. The old saying that “Culture is what is left when everything else has been forgotten” seems to find a practical translation into public policies “Culture is what is served when everything else has been dealt with.”

4.2. Need for a holistic and flexible perspective

The specialist and functional approaches to information literacy miss the fact that culture and information are facets of each other. The entire cycle of information and knowledge is culture-dependant at the same time contributing to the evolution of culture (Menou, 1983). Adding some new knowledge and skills to an otherwise unchanged body of culture is nothing but the famous French recipe of the “plaster on the wooden leg.” Especially when in practice the vast majority of the resources are allocated to carving the wooden leg, in that case the ICT infrastructure.

Information literacy cannot be restricted to learning how to find and use information under whatever form, and possibly how to produce some basic information-as-objects. It has to deal with the very concept of information and its functions in human societies. If those who learned how to ask the right questions and express themselves feel that they are not supposed to do so, or fear that are going to be harassed if they do, they won’t make much use of their skills, if they even dare to.

It is worth emphasizing that the notion of culture is not less vague and subject to infinite variations than the notion of information. The more inclusive the perspective the better is our view (Menou, 1997). Thus not only do we take it as Jean Rostand said for “all what the human being has learnt, experienced, felt over the centuries”—actually millions of years—but also how he/she enact this heritage, and has the latitude to do so in the various social environments in which he/she performs. The concern for information literacy is often associated with an extraordinary cultural absolutism. Only the most advanced forms of information products and their use are considered. Who does not know how to read the newspapers in print or on the Web is not information literate. But does the considered person need or want to read the newspaper? Does not that person find relevant information in other, non-formal sources? There is not only a plurality of culture on this planet, but many people

are in fact living in several cultures at the same time, to make the situation even more complicated. This probably explains why the issue is so often dealt with in the most simplistic fashion.

4.3. Conditions for cultural approach to information literacy

Cultural pluralism within and among societies should thus be recognised in first place, together with the multiculturalism experienced by individuals and groups. Cochrane and Atherton (1980) stressed this need long ago and offered insightful principles for analysing cultural conditions and taking appropriate action toward the overcoming of information poverty. The latter includes:

- Contextualism: fitting materials to the cultural environment
- Incrementalism: deciding how much can be done at each step
- Motivation: assessing receptivity to information
- Absorptive process: how best to acquire information. (p. 290-291)

But beyond this good advice there is a need for expanding from a purely didactic solution. This is not to question the capacity of education and training to contribute to changes in values and behaviour – at least if they occur within the appropriate context, especially with regard to actual conditions of access to ICT, and are imparted with appropriate methods. The true stake is appropriation of not only ICT but also of their role in individual and collective endeavours. In this respect, the present push toward privatisation of everything including natural or built-up sceneries, and common linguistic expressions is somewhat preoccupying. Quéau (1997, p. 105) alerted on this fundamental contradiction several years ago:

Or c'est au moment où l'explosion technologique laisse espérer un surcroît de possibilités pour l'élaboration et la diffusion des informations et des connaissances que se mobilise une coalition de lobbies déterminés à réduire encore ce domaine public, à renforcer son appropriation par le privé et à briser l'équilibre entre les détenteurs de droits de "propriété intellectuelle" et les usagers.¹¹

Effective use of ICT toward sustainable development is bound to their full appropriation by a new citizenry in which all communities will find the ways to their improved existence and enlightenment. A good example of this can be found in the following testimony:

J'ai interviewé un vieux de 75 ans dans le cadre de mes recherches. Je lui ai demandé sa réaction la première fois qu'il a vu sous l'arbre a palabre la première projection publique d'un site web sur son village:

- Cela nous ne savons pas ce que c'est mais il nous le faut dans notre village.
- Et pourquoi vouloir ce que vous ignorez ?
- Parce que je sais que nos fils ne feront que du bien pour le village, ils sont différents des Toubab qui veulent seulement vendre notre culture où tirer gloire de notre histoire qu'ils ont tant déformée. Cet outil s'il peut faire le tour

¹¹ It is at the moment when technological explosion lets hope for an increase of possibilities for the production and diffusion of information and knowledge that a coalition of lobbies mobilizes itself with a view to reduce even more this public domain, strengthen its appropriation by the private sector and brake the balance between the holders of "intellectual property" rights and the users.

du monde est peut être le moyen de raconter l'histoire et la vraie culture africaine. ¹² (Mbengue, personal communication, 2001)

5. CONDITIONS FOR A NEW DEAL

The “new” society gurus, whose discourse often serves as a substitute to thinking in national and international organizations, consistently insist upon the liberation capabilities of ICT. Thanks to ICT everyone will be able to learn, create, communicate etc. Eventually any positive achievement is attributed to ICT and their applications as for instance Mansell and When (1998) seem to imply in the case of the relative decline of Latin America vis-à-vis the “East Asian Tiger” countries between the 60’s and the 80’s. The first requirement may thus be to take a colder and more balanced look at realities and abandon the oversimplified hypes.

5.1. Coping with the size

The double language that is apparent in the statements of the major players is quite interesting. One example among so many can be found in the quote below:

Basic literacy is of crucial importance for development and, as such, is one of the development imperatives adopted by the UN Millennium Summit. However, for the purposes of adopting a strategy that deploys ICT as an enabler, it is not an absolute requirement that a country begin with a high literacy rate. In order to deploy ICT for development, it is important for countries to develop a critical mass of knowledge workers, technology users, and motivated entrepreneurs. (Accenture et al., 2001, p. 35)

Of course, one can easily defend that achieving universal literacy is a daunting task and thus a stepwise approach is required. This however is a bit different from satisfying oneself with a “critical mass” which can probably be otherwise called “profitable market” or “cost-effective business partnership.” While differences of visions, approaches and interests are perfectly legitimate, the democratic debate does not improve when advertising creativity becomes a standard substitute to argumentation.

The elitist “critical mass” approach unless otherwise specified, is hardly defensible from democratic and practical standpoints. It would be surprising that the overall performances of a society with a majority of people remaining outside the “information society,” even though a solution to this problem was long ago offered with the α and β social differentiation model of “Brave New World.” Conversely bringing the entire population into information literacy, considering the massive investment required, can only be a long term objective to be implemented step by step. Rather than dispersing the resources allocated toward the achievement of the otherwise arbitrary quantitative targets on the basis of opportunities, it

¹² I interviewed an elder aged 75 as part of my research. I asked for his reaction when he saw for the first time the Web site of his village in a public projection under the village tree:

- This we don't know what it is but our village should have it
- And why do you want to have something you don't know what it is?
- Because I know that our sons will only do good to our village; they are different from the Toubab [white men] who only want to sell our culture or take pride for our history they have so much distorted. This tool if it can travel around the world is perhaps the means for telling the history and the real culture of Africa.

might be advisable to concentrate them in a few regions where all members of the communities can become involved and thus create the show cases and emulation that will support and facilitate further efforts in other areas at a later stage. In other words seek a snowball effect from a few poles where the widest possible coverage is sought.

5.2. Education for information literacy cannot be dispensed by machines only

An interesting feature of ICT is that they can be at the same time the object and channel of learning. This naturally attracts the attention of administrators and funding agencies always in quest for the straight, simple, large scale and cheap solution--thus the idea that self-teaching materials and programmes on the Internet will be able to solve most of the information literacy and computer literacy problems. Such resources could obviously be a precious asset and make an essential contribution to the training activities at all levels. Somos@Telecentros has for instance put great emphasis on its on-line resource centre.

But even the effective consultation of these resources often requires human intermediation. When it comes to actually imparting knowledge and skills to learners, there is ample evidence that a human intervention in the form of instruction, mentoring, informal guidance or else is an absolute must. It is in a way frightening to see that the same gross misconceptions, in both directions, are expressed regarding computer mediated instruction as they were for educational television many years ago. Of course, distance education techniques can be applied in this area. They are by the way far from dispensing of human participation. And they do require too appropriate forms of face-to-face interaction. The more so when information literacy is as it should be deeply rooted in social and economic development efforts.

In relation to distance education ICT present a unique potential for facilitating cooperation among various institutions and with the instructors and learners for the production, application and maintenance of the resource. A typical example is offered by Itrainonline (www.itrainonline.org). Such joint efforts and sharing of resources could indeed result in noticeable economies of scale. But past experience, e.g. PROGEFIA (Menou & Niang, 1991) that was not even given the chance of a practical start shows that there is a long way from the lip service paid to the necessity of cooperation and its actual implementation—especially in the education sector. In this respect too, it is people vision and willingness, or rather lack of, that makes the difference.

5.3. Education is not a response without development

Computer and information literacy, like their pre-ICT versions, literacy and numeracy are primarily relying upon education. The achievements so far of literacy efforts call for humility as we stressed elsewhere (Menou, 2001b). Illiteracy is still estimated at 20.6% of the world population in 2000 against 37% in 1970, and respectively 11.7% against 26.1% in Latin America (Unesco, 2002). At this pace networked computers or cyborgs will have become self-reliant before a majority of the population can take advantage of them. The new phenomenon of “aliteracy” observed in more advanced societies, that is a rejection of reading in favour of passive watching and listening of audio-visual media is a further warning. The extension of SMS messaging on mobile phones among teenagers may well bring some more surprises.

This is not to say that formal and informal education efforts should not be a central piece of the information literacy campaigns. Assuming they are not constrained into some sort of “functional computeracy.” But they won’t have any effect if not part of an overall movement

in which the people relationship to their environment, condition and ICT is transformed. As Ballantyne (2001) pointed out:

eDevelopment sounds like it is development through the Internet or ICT-driven development. It is neither. eDevelopment is development that is effective, efficient, and empowering. It is development that uses ICTs to increase people's opportunities, to empower poor people, and to counter insecurity and vulnerability.

This need for a holistic approach is well illustrated by the story below from SITA in the New Delhi area (India):

During its two-year operation, SITA has recorded many achievements like development of a multilingual Resource Package, design of a user-friendly training strategy, and using the Package and the strategy to train nearly 450 women from a disadvantaged background.

One of SITA's pleasant experiences was the ability of most of the trainees to pick up computer skills in spite of limited educational background and poor communication ability, particularly in English. However this did not prevent them from doing satisfactory work of diverse types like data entry, word processing, DTP, etc. They have also processed manuscripts in English, Hindi, Punjabi and texts involving scientific and mathematical symbols for books, newsletters, journals, Conference Proceedings etc. All this work has been received from international sources and samples can be sent for inspection. For details please visit www.kcetv.org and www.sitaa.org.

.../...

A surprising and disappointing experience was the poor response of the job market to the project trainees. The inability of a majority of trainees to find jobs shows that good training by itself does not serve the needs of the individuals from the disadvantaged sector. If SITA type of efforts are to survive and grow, identification and implementation of income generating schemes must be given the highest priority. (Murgai, 2002)

5.4. Support local initiatives rather than impose ready-made solutions

From this standpoint the role of true telecenters, that is social development institutions that use ICT inter alia, can be critical. The basic training they offer is linked to the other activities in which the learners will be involved and find the opportunity not only to practice their new skills but more importantly to use them toward the achievement of some individual and collective objective that they themselves have chosen.¹³ It is probably the reason why some try and spread a recipe for failure according to which telecenters should restrict themselves to complementing educational and training program that are the responsibility of the educational institutions:

Los telecentros **deben ser visto como complemento – y no como sustitutos - de programas nacionales de educación formal.** Estos programas formales son hoy día indispensables y deben incorporar la familiarización del estudiantado, y

¹³ One will find a number of practical examples of such endeavours on the Web site of [Somos@Telecentros](http://www.tele-centros.org) <http://www.tele-centros.org>

de los profesores en particular. con las nuevas tecnologías. (Proenza et al., 2001, p. 54)¹⁴

As a matter of fact the right solution might be the other way around, especially when one knows the degree of decay of public education in many countries, not necessarily the poorest ones only. That is to say that schools will find in the telecentres not only the facilities but also the proper environment and the agenda for practical activities that will make their information literacy efforts a positive experience for all.

Rather than grandiose national plans whose major success, irrespective of their origin, is their failure to meet objectives and deadlines, it would be far more easy to:

- work out basic guidelines for community initiatives toward the information society, including information literacy,
- define the conditions for these initiatives to receive appropriate, non-intrusive and long term public support, and
- establish a funding program to support a significant number of such initiatives.

This would allow successful experiences to flourish out of community efforts in response to their real needs and according to their actual capacities. The latter will naturally spread over their country of origin and beyond by virtue of concrete example and direct interaction. A people's model will be far more appealing than the few best practices supported by multilateral organizations that are so intensively and repetitively promoted. Such an approach was tentatively outlined for the implementation of the proposals of the learning circles that participated in the project "El Salvador Learning Society" (Courtright, C., San Sebastián, C., 1999).

Another striking contradiction is the concentration of efforts, be they of infrastructure, accompanying measures, information literacy, social development or else, in the most densely populated areas at a time rural emigration toward ever more unmanageable megapoles is seen as a major challenge, no to say announced disaster. If initiatives of the rural and isolated communities would be given priority in a program of the kind we outlined above, this situation could be perhaps be corrected.

Many world leaders seem to have found in ICT promotion a new ground for establishing their popularity. To the point that we have formulated a law of progressive modern government: "*If you don't know what to do, do it at least on the Web*"©

It is of course positive and necessary that policy- and decision-makers understand the role of ICT and are willing to support appropriate policies and programmes in this area. But it would be far better if they would be willing to pay to the projects proposed by the people the same attention they pay to those emanating from the techno-structure or their election campaign staff. The popularity of contests like the Stockholm challenge or the InfoDev calls for proposals show that imagination, commitment and success are not in scarce supply among the people.

¹⁴ Telecentres should be seen as a complement, and not a substitute, to the national programmes of formal education. These formal programmes are indispensable today and should include the familiarization of pupils and the professors in particular with the new technologies.

5.5. Preaching in the desert?

Thirty years ago, there was no “global information highway” nor “Internet for everyone.” But the “information revolution,” at least as the exponential growth of the output of scientific and technical literature, was focusing the attention of science policy bodies and the information professions at large. In a paper given at the first, and only since then, international conference on training for information work we noted:

The amount of STEI¹⁵ items presently produced and the conditions of their use in modern societies make it necessary that STEI be organized on a rational and economical basis, as other activities are.

This is the industrial revolution of information for which technical training on new processing and organizing methods is needed.

But, as far as STEI is a modality of power practice, its widening and effectiveness suppose an effort to transform economic and social structures in order to reduce antagonisms and ensure that everyone can take a really responsible part in society.

According to societies, this is a more or less important political revolution.

But if these transformations are to be really worthwhile they have to be accompanied by significant changes in mentalities, in the image and practice of the trinomial “Man-Knowledge-Environment.”

This is a cultural revolution.

As regards the last two features we do not think that many results are likely to occur within the coming years or centuries.

But we do indeed believe that no undertaking and no training for STEI is worthwhile unless it has taken into account the above mentioned contradictions and at least tried to tackle them through the various possible approaches, within the very small margin between old-established habits and change acceptance. (Menou, 1972, p. 453)

The industrial revolution has since been under way and made significant advances, at least in the primary information sector. In the two other realms one may also note great steps, but unfortunately often backwards.

Contact: Michel.Menou@wanadoo.fr

Suggested Bibliographic Citation:

Michel Menou, " Information Literacy in National Information and Communications Technology (ICT) policies: The Missed Dimension, Information Culture ," July 2002, White Paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts, Prague, The Czech Republic.

Available at:

<<http://www.nclis.gov/libinter/infolitconf&meet/papers/menou-fullpaper.pdf>>

Quoting from or reproduction of this paper is permitted when accompanied by the foregoing citation.

¹⁵ STEI : Scientific, Technical and Economic Information

References

- Ainley, P. 2002. The Learning Society Revisited. *Information for Social Change*, No. 14, Winter 2001-2002. Accessed: <http://libr.org/ISC/articles/14-Ainley.htm>, 5 February 2002.
- Accenture, The Markle Foundation, United Nations Development Program. 2001. *Creating a development dynamic. Final report of the Digital Opportunity Initiative*.
- Anandarajan, M., Igbaria, M., Anakwe, U.P. 2002. IT acceptance in a less-developed country: a motivational factor perspective. *International Journal of Information Management*, Vol. 22, No. 1, p. 47-65.
- Ballantyne, P. 2001. *E-development: what's in a name*. I-connect bulletin 14th December 2001. Accessed: <http://www.iconnect-online.org>, 20th December 2001.
- Cochrane, G., Atherton, P. 1980. The cultural appraisal of efforts to alleviate information inequity. *Journal of the American Society for Information Science*, Vol. 31, No. 4, pp. 282-92.
- Compartel. AMI (Acceso Masivo a la Información). 2002. *Que es AMI.COMPARTEL?* Accessed: <http://www.ami.net.co>, 12th February 2002.
- Courtright, C., San Sebastián, C, eds. 1999. *Estrategia para la creación de una sociedad de aprendizaje en El Salvador. Conectándonos al Futuro de El Salvador*, San Salvador. Anexo 2. Esquema Propuesto de Implementación de los Proyectos. Accessed: <http://www.conectandonos.org.sv>
- Courtright, C. 2001. *'Informationalizing' El Salvador: Issues and challenges for digital divide researchers*. Working paper presented at the Digital Divide Doctoral Student Workshop, School of Information, University of Michigan, Ann Arbor, August 1-5, 2001
- Digital Opportunity Task Force-DOT Force- 2001. *Digital opportunities for all: Meeting the challenge*. Report of the Digital Opportunity Task Force (DOT Force) including a proposal for a Genoa Plan of Action. 11th May 2001.
- Faulhaber, G. 2001. *Keynote address to the 29th TPRC Research conference*. Alexandria, VA, October 27-29, 2001.
- Fundación Chasquinet, 2002. *Estado del arte de los Telecentros en América Latina y el Caribe*. Quito, February 2002. Accessed: <http://www.tele-centros.org/telelac.html>, 6 February 2002.
- Gallouedec-Genuys, F., Lemoine, P., eds. 1980. *Les enjeux culturels de l'informatisation*. Paris. La Documentation Française. Informatisation et société 9.
- Gore, A. 1994. *Address to the General Assembly of the International Telecommunication Union*, Buenos Aires, Argentina, 21st March 1994.
- Horton, F.W. Jr., ed. 1995. *Towards the global information superhighway. A non technical primer for policy makers*. The Hague, Netherlands, International Federation for Information and Documentation (FID). FID Occasional paper 11 prepared by the FID Task Force on

Global information Infrastructures and Superhighways.

Kirkman, G., Sachs, J., Stone, G.D. 2001. Substract the divide. Wordlink, January/February 2001. Accessed: [http://www.worldlink.co.uk/stories/StoryReader\\$523](http://www.worldlink.co.uk/stories/StoryReader$523), 16th February 2002.

Levi, P. 1979. *If it is a man & The truce*, Viking Press.

Mansell, R. When, U. 1998. *Knowledge societies: Information technology for sustainable development*. Oxford University Press.

Mbengue, M. 2001. Private communication.

Menou, M.J. 1972. Information revolution or revolution for information. In: Lubbock, G., (ed.). *International conference on training for information work. The proceedings*. Rome: Istituto Nazionale dell'Informazione; 1972: pp. 449-453.

Menou, M.J. 1983. Cultural Barriers to the international transfer of information. *Information Processing & Management*, Vol. 19, No. 3, pp. 121-9.

Menou, M.J., Niang, T. 1991. PROGEFIA: a cooperative effort toward the strenghtening of education for agricultural information in the less developed countries." In: Goedegebuure, B.G., Arango Sales, H.R., Sotolongo, G., (eds.). *Information, a resource for development*; Havana, Cuba, 19-22 September 1990. Amsterdam, Elsevier, 1991, pp. 65-79. (FID 690).

Menou, M.J. 1997. La culture de l'information. In: Cacaly, S. et al., eds. *Dictionnaire encyclopédique de l'information et de la documentation*. Paris, Nathan, pp. 167-9.

Menou, M.J. 2001a. *Digital and Social Equity? Opportunities and threats on the road to empowerment*. LIDA 2001 Annual Course and Conference. Dubrovnik, Croatia, 23-27 May, 2001. 7 p. Accessed: http://www.cnam.fr/instituts/INTD/Menou_intd-er.PDF.

Menou, M.J. 2001b. *Educating citizens of the global learning society*. Cooperation South, (UNDP/TCDC). No. 1, 2001, pp. 82-91. Accessed: http://www.tcdwide.net/tcdcweb/coop_south_journal/2001_oct/index.html.

Ministerio de Ciencia y Tecnología. 2000. *Plan Nacional de Tecnologías de Información* (Versión 1.3). Caracas, MCT, Octubre de 2000.

Murgai, M. 2002. Message of Tuesday, February 12, 2002, to the Global Knowledge Development list .Subject: [GKD] *Project Trains Women in Computer Skills* (India). Accessed: <http://www.globalknowledge.org>.

OSPITEL. 2002. *Proyecto Cabinas de Acceso Público a Internet en capitales de distrito*. Accessed: <http://www.osiptel.gob.pe/fitel/cont/proys/cnet.htm>, 27th January 2002.

Páez Urdaneta, I. 1990. *Información para el progreso de América Latina*. Caracas, Universidad Simón Bolívar y Congreso de la República.

Proenza, F.J., Bastidas-Buch, R., Montero, G. 2001. *Telecentros para el desarrollo socioeconómico y rural en América Latina y el Caribe*. Oportunidades de inversión y

recomendaciones de diseño con especial referencia a Centroamérica. Documento de trabajo. Washington D.C., FAO, ITU, BID. Accessed: <http://www.iadb.org/regions/telecentros/index.htm>, 4 April 2001.

PSI – Programa Nacional par la Sociedad de la Información. 2001. *Estado inicial, informe de avance, formulación estratégica y plan de acción*. Buenos Aires, Programa Nacional par la Sociedad de la Información de la República Argentina.

Quéau, P. 1997. Pour le droit public à l'information sur Internet. In: Ramonet, I., Cassen, B., Halimi, S., eds., *Culture, Idéologie et Société*. N° Hors Série Manière de voir, Le Monde Diplomatique, pp. 104-8.

Somos@Telecentros. 2000. Papallacta Manifesto. 1st meeting of the network of Latin American and Caribbean Telecentres, Papallacta, Ecuador, 31 March 2000. Accessed: <http://www.tele-centros.org/>

Straub, D.W., Loch, K.D., Hill, C.E. 2001. Transfer of Information Technology to the Arab World: A Test of Cultural Influence Modeling. *Journal of Global Information Management*, Vol. 9, No. 4, pp. 6-28.

Takahashi, T., ed. 2000. *Sociedade de Informação no Brasil*. Livro verde. Brasilia, DF, Ministério da Ciência e da Tecnologia. Accessed: <http://www.socinfo.org.br>

UNESCO. 2002. Accessed: <http://www.uis.unesco.org/en/stats/>, 19^h February 2002.

United Nations Development Program. 2001. *Human Development Report 2001. Making new technologies work for human development*. New York, Oxford University Press World Resources Institute. Digital Dividend Program. Washington D.C. Accessed: http://www.digitaldividend.org/action_agenda/action_agenda.htm, 12th February 2002.