

Reading, Information Literacy, and Information Culture

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Prefatory Note

One of the most important challenges of the Information Society is to extend *information literacy skills* to all individuals on the planet. Otherwise, even highly computer literate people and societies will not be able to reap the benefits of the Internet Age. And the likelihood of the continuing aggravation of the problem of the divide between the "information haves" and the "information have-nots" will have progressively wider and wider political, economic, and social destabilizing affects. But information literacy must be very carefully introduced into the classroom, much less into whole societies, and into diverse cultures. Moreover, information literacy must be inter-related to two other fundamental and very closely related objectives—increasing and widening basic reading literacy skills and levels, and modernizing cultures so that they can become members of the Information Society. These three key related ideas, information literacy, reading literacy, and modernizing cultures are inter-dependent and even counter-dependent. Therefore, unless they are treated together in the context of educational reforms, public policy planning, and developmental improvement strategies, there is a risk that national policies, institutional educational and training reforms, and costly resources will be misdirected, wasted, and be unnecessarily complex and overlapping. Certainly one key objective is to reduce the enormous differences among different societies and cultures in reading, public information access, and information utilization expertise (which is closely dependent on societal cultures) that exists among nations, as well as the wide differences that exist inside national territories, such as between urban and rural geographic areas, between different kinds of institutions, between different societal sectors, the comparative economic advantages and disadvantages of different regions, and so forth. But there is a real risk of a "disconnect" between information literacy, reading, and cultural changes if they are not treated by countries as part of the same holistic fabric. That is what this paper endeavors to do, treat them as a part of the same fabric, and in so doing draws from both the extensive personal academic research and on-the-job experiences of the author and the published results of the research of others.

1. INTRODUCTION

The 20th century was distinguished by many noble national, regional, and international efforts to:

- eradicate, or at least substantially ameliorate, basic illiteracy—reading, writing, and arithmetic, especially among developing countries;
- increase the highest educational attainment level for children and young adults—both in terms of the quality of instruction given them, as well as in terms of the number of years spent in school;
- ensure that every nation comes to regard education as a basic human right, not just the special privilege of elite classes and the rich; and
- strengthen the role and the function of libraries as a means to democratise reading and other information literacy skills.

Therefore, it was reasonable to expect that as we entered the 21st century, individuals would, by now, be expected to have:

- acquired the necessary aptitudes for both qualitative and quantitative reading;
- incorporated skills to find, evaluate, and use information effectively; and
- improved their knowledge management expertise.

This expectation is particularly reasonable in the case of developed and developing countries that have expended significant resources and given high priority to programs designed to strengthen their educational and information systems and overall infrastructure.

By achieving the aforementioned optimum scenario, it was assumed that by the beginning of the 21st Century we would be faced with much better prepared populations, ready to be trained on how to access, organize, evaluate, and use information, especially electronically accessible information. However, research that was recently carried out by the Organization for the Economic Co-operation and Development (OECD) in 36 countries that assessed the level of reading aptitude of young people that had finished the basic educational level spotlighted some glaring deficiencies.

The OECD study (2001) revealed that in most countries studied, the basic literacy skills for simple text comprehension, information identification, and information use to solve simple problems and formulate simple hypotheses, were woefully inadequate. However, despite this overall, rather gloomy assessment, twelve of the 36 countries could be considered as rough prototypes ready for the first stage of the Information Society, given the fact that they exceeded the average levels for the total sample.

2. THE INFORMATION SOCIETY—WHAT EXACTLY DOES IT MEAN?

Across the globe, present day nations often label themselves as an "Information Society" or a "Knowledge Society." They point with pride to their reading skills, and how informed their population is. They claim to have highly-evolved informing aptitudes, and the ability to use, and to be informed by different media.

According to an excellent Statement of Principles recently articulated by the International Federation of Library Associations and Institutions (IFLA),

every person should and can use libraries in a free and efficient way in order to obtain information, acquire independent decision making skills, and help cultural evolution and economic development [1].

This statement of principles renews and strengthens the fundamental idea that the level of reading skill, perhaps more than anything else, fully opens up (or limits as the case may be) the full possibilities to document the human experience, to inform others efficiently, and to become, and remain, well-informed. That is why many countries must resolve to rise above their tendency to reduce and oversimplify basic reading skill to a simple recognition of signs. That is to say, down to the level of a mechanical and rote reading ability that does not extend to fully understanding meaning and how content relates to previously learned materials.

The Utopian Information Society is said to be at its core a learning society, in which every individual has learned to be able to satisfy his/her personal needs by means of acquiring and using information efficiently, including its application to life's many different challenges, including:

- seeking and maintaining employment,
- social cohesion, including family, social group, religious pursuits, and so on,
- quality of life improvement,
- geographic or "regional" cohesion,
- lifelong education and training,
- research skills,
- understanding and utilizing mass media,
- health, safety, and security needs,
- participating in democratic processes,
- understanding the concept and protections of intellectual property, and
- surviving and prospering in the electronic marketplace, etc. [2]

Following this idea, the United Nations Educational, Scientific and Cultural Organization (UNESCO) conceives the Information Society as "Information For All," in which the Information For All Programme,

provides a framework for international co-operation and international and regional partnerships. This programme supports the development of common strategies, methods and tools for building a just and free information society and for narrowing the gap between the information rich and the information poor [3].

¹ Cf. Report prepared for the IFLA Council Meeting in Copenhagen, Denmark, 1997, p. 2.

² Sánchez Bravo, 2001.

³ *UNESCO's Information for All Programme: Shaping a just information society with universal benefits*, 2002, accessed: www.unesco.org/webworld/ifap/.

Certainly, during this 21st century, it is reasonable to expect that the progress made so far to lessen, if not fully resolve the political, economic, and socio-cultural imbalances among countries, and to reduce the huge and increasing gap that separates those countries which have reached a very high development level from those which have not yet been able to change their status from "developing" or "under-developed" to "developed." Information literacy has a key role to play in this regard.

But the challenge should not be cast in terms of how information resources and other information technologies can be simply "added" and thereby create even greater social imbalance, but rather be cast in terms of how the advances of digital technology and telecommunications, notably the Internet, can be used to reduce the inequalities of the historically excluded groups. In so doing, then, modern information handling resources can help reduce, and eventually make disappear, the inter-nation state capabilities gap. The risk of exacerbating the so-called "digital divide" can thus be avoided.

The Internet phenomenon seems to dramatically symbolize everything implied in the informative culture of 21st century society. That is to say, the Internet is considered an invisible dividing line that circumscribes not only a generational gap between individuals in the same family, but an even far more general dividing line between "BI" meaning "before Internet, and "BA" meaning after Internet. The Internet also presents us with new dualities comprised of opposite pairs that are locked in a constant struggle.

For example, between:

1. the hand-written cultures on the one hand, and the digital cultures on the other;
2. those who know how to use, and do use the modern information and telecommunications technologies and those who do not;
3. oral tradition peoples and writing tradition ones, in which the first are considered as archaic and wild (in other words primitive or even uncivilized), and the second are considered learned and civilized.

In a few years, those groups and nation-states that will not be able to reach the minimal required reading and information literacy skill levels, including accessing and effectively using digital information technologies, may well be catalogued and dismissed as socially primitive, scarcely developed economically, and poorly evolved politically.

In order to prevent this from happening, UNESCO has proposed the following objectives for its Information Society initiatives, including the "Information for All" programme (www.unesco.org/webworld/ifap/):

- to promote international reflection and debate on the ethical, legal and socio-cultural challenges of the information society;
- to encourage access to public domain information through organization, preservation and digitization;
- to support training, continuing education and life-long learning in the area of information and informatics;
- to promote the use of standards and best practices in information and informatics applicable to UNESCO's areas of competence; and
- to promote networking at the national, regional, and international levels.

Already many of these objectives can be observed in the development plans of the more developed information societies, including new laws, new policies, new programs, and other initiatives designed to:

- strengthen citizen access to public domain information;
- promote and accelerate the use of new information and telecommunications technologies, especially in the fields of economic and social activities, including the education, culture and health spheres;
- encourage greater scientific research and technological innovation;
- implement the wider use information and telecommunication technologies, as well as program "intelligent actions" for national information infrastructures;
- train information and communication technology professionals; and
- strengthen quality control measures for information-source content, especially for electronic online information resources.

The educational arena is being afforded special attention by developing and developed countries in order to education and train individuals who are capable of generating new knowledge, and effectively utilizing existing knowledge. A closely related set of initiatives is the design, development, and testing of citizen electronic information services that is provided by the different government sectors.

In sum, we must learn to conform to the new information-driven cultural environment. That means that both public and private institutions must guarantee the availability and accessibility of public information. It also means assigning responsibility to train citizens to use and exploit to the fullest extent information resources for their personal and for broader social benefits. But just what do we mean by "the information culture?"

3. THE INFORMATION CULTURE

The concept of an "information culture" seems to be the result of not only the advent of the new digital technologies, but also a new mindset. We are changing the very basic traditional ways in which human beings communicate with each other, inform others, and become informed themselves. The notion of an information culture is increasingly being applied to a greater and greater number of both personal and collective social activities such as in the workplace, in the factory, in the office, and in the laboratory, not to mention in the activities of informal social groups.

The new information culture should be understood as a dynamic process enabling the:

- improvement of intellectual faculties;
- design and development of the many and diverse mediums and communication forms and formats that are optimally necessary to generate knowledge;
- improved understanding, not just communication;
- socialization of information, meaning expanding and extending its use throughout all spheres of human activity.

The ultimate goal of modern information cultures is to increase the amount of sharable knowledge and experience, while at the same time helping to solve specific and chronic individual and social problems.

Present day information cultures are immersed in an identification process that easily can be observed in UNESCO's visions and values.

4. UNESCO's VISIONS AND VALUES

First, the visions. The "Information for All" programme is designed:

- to ensure that everyone has access to the information they need to participate equitably in a global information society and to pursue objective truth as well as free exchange of ideas and knowledge,
- to enhance the well being of every man and every woman, enabling them to contribute to and fully enjoy their culture,
- to develop an appropriate infrastructure for the preservation and global sharing of information and knowledge by citizens of all countries.

Next, the values:

- Information and knowledge constitute a global public good and are essential for advancing education, science and culture as well as for fostering democracy; information and knowledge are also instrumental to bridging the gap between the information rich and information poor.
- Free and universal access to information is a fundamental human right, as it allows people to freely participate in the cultural life of the global community, to enjoy the arts, and to share scientific advancements.
- Information preservation, access and processing in the Information Society have a strong ethical dimension and create global and moral responsibilities.
- The quality, reliability and diversity of information are of utmost importance.
- Free and universal access to information is indispensable for cultural diversity and the preservation of the heritage of nations.
- The preservation of the information heritage of nations in its traditional and new forms is an important condition for free and universal access.
- Intellectual property regimes must carefully balance the rights of authors and creators with the public interest to reward creation, research and innovation while ensuring widespread access to knowledge and protection against monopoly rents.
- Privacy and security of personal data in the Information Society must be considered as crucial for the protection of human dignity.

The citizen of the Information Society inherits his or her cultural background as a legacy from the 20th century. He or she will be trained to enter a more advanced level of civilization. But basic reading capacity in many countries, and consequently the daily joy and practice of reading, as a benchmark of higher development, reflects very serious qualitative as well as quantitative deficiencies. That is to say, in many societies less and less reading is taking place in absolute terms, and where it does take place, relatively more reading is carried out in perfunctory and mechanical modalities. By

contrast, image and oral information seem to strongly attract the majority of the inhabitants of the Information Societies.

5. READING

Will the information society become a society without readers? A serious problem relates to the diminishing of reading skills and aptitudes in populations that have recently concluded their basic formal education, whether at primary and secondary levels, or among university students. The problem is, simply, that there seems to be a decrease in both the quantity and quality of reading material. This trend seems to be affecting both developed and developing countries. It implicitly presents an important issue to the Information Society. As S. Murray emphasizes,

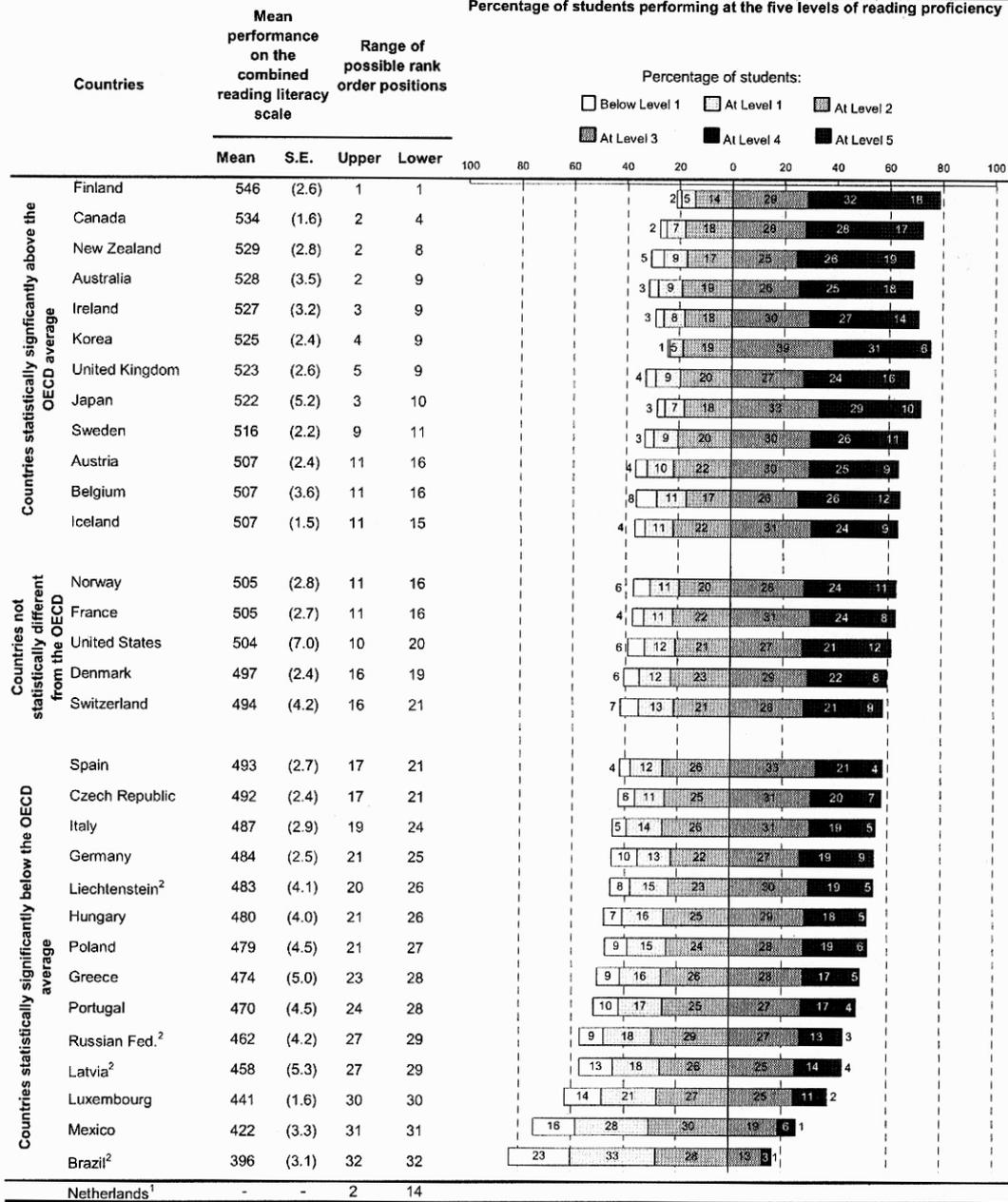
the reading literacy level (the ability to understand what has been read) constitutes an important measure of the skill of a country to develop a competent labor force with which it can, in turn, acquire a competitive advantage in the global economy [4]. Although true, Murray's statement is somewhat limited because the benefit is tied not only to the economic factor, but also involves far-reaching political and social aspects as well.

That is why the Organization for Economic Co-operation and Development (OECD) has focused its attention on reading skills, with the objective of benchmarking individual reading skills in member states, particularly among young people. The Programme for International Student Assessment (PISA) of the OECD carried out an assessment in 32 countries aimed at measuring reading, mathematic and science competencies, particularly skills necessary to solve real challenges. The research, entitled "Knowledge and Skills for Life," was applied to 26,000 15 year-old children that completed their compulsory education. According to the OECD research, which defined "reading" as the capacity to understand texts, evaluate information, build hypotheses, and take practical advantage of knowledge, the ultimate purpose was to find out to what extent individuals are capable of building, developing and interpreting the meaning of the material they read. The results obtained are presented below:

⁴ Murray, Scott. (*Human Resources Development Canada-Statistics Canada*) en: *Globe and Mail Council of Ministers of Education, Canada*, 2001, available: www.canadaen espanol.com/canada_primer_en_lectura.htm.

Reading Literacy

Percentage of students performing at the five levels of reading proficiency



1. Response rate is too low to ensure comparability (see Annex A3).

2. Non-OECD country

As can be observed from the preceding chart, the OECD established three levels—higher, normal, and lower. First, the *normal* range was established as between 506 and 494. Within the normal range, only five countries are included: Norway, France, The United States of America, Denmark and Switzerland. Twelve countries surpassed that scale and were included in a *higher* level, 545-507. At the top of this higher group is Finland, followed by Canada, New Zealand, Ireland, Korea, United Kingdom, Japan, Sweden, Austria, Belgium, Island and Australia. These countries might well be considered as constituting an ideal "readers' model" and be considered one of the key parameters of the Information Society.

In the third, *lower* group 14 countries are found, and they are considered as being significantly below the normal range. The lower group range is between 493 and 396. As the scale descends, the reading skill necessary to research and locate a specific item of information, identify the main theme(s) of a read text, or establish a simple correlation between what has been read and the current knowledge possessed by the reader, are progressively reduced. Therefore, this research revealed that as students tend to read more and more in a technical aspect, they limit themselves because they do not acquire the capacity to ascribe the full and deeper meaning to what they read and, as a consequence, they are confronted with additional difficulties in trying to widen their knowledge base. That is to say, they move away from "sophisticated" (advanced) reading skills that allow them to acquire a detailed understanding of the texts' contents. They also miss the identification of the key components of the text, and their relevance to what is already known. And they do not acquire analytical skills to evaluate the text itself, or its source. Nor are they able to develop hypotheses based on relating the knowledge they already have with the new knowledge they acquire.

Another aspect that is quite interesting is the relationship between gender and reading. Women perform better than men understanding what they have read but are outperformed by men in mathematics and sciences.

The two major factors that cause a deficiency in reading skill are (1) the family and (2) the educational institutions. The first factor is responsible for not encouraging the pleasure of reading; while the second factor involves the responsibility to ensure that reading is considered a means to memorize and repeat information already assimilated. It is often observed that the pleasure of reading is discouraged in large part because of a misguided utilitarian preoccupation with immediate, rather than long range goals. Another factor is the tendency of economies to favor the consumption of goods over the promotion of culture. Added to this, there is the mass media that increasingly offers easy entertainment, accessible more and more through images rather than text, and often presenting rather content-impoverished messages that seem to aim at reducing complexity and nuances that might otherwise enable their audiences to escape [5]. In this way, reading becomes regarded as a complex and difficult activity rather than a simple and pleasurable activity, as compared to the offerings of the popular media.

Undoubtedly, however, the results of the planned OECD research to be carried out every three years has begun to focus governments' attention on reading (albeit the emphasis is on the pedagogical processes). However, the educational challenges must

⁵ Ramírez Leyva and Elsa Margarita, 'La lectura en la sociedad contemporánea', *Investigación Bibliotecológica*, Vol. 15, No. 30, pp. 114-131.

be recognized, in a deeper sense, as the consequence of a deficient "informative culture" that has its roots in ideological, economic and historical considerations.

Reading, therefore, becomes an obstacle to attaining the skills that are implicitly required by the information literacy concept. But also becoming more fragile, according to UNESCO, is,

the growing gap between the illiterate and the literate, in the context of new possibilities of literacy development and application, opened both by the new technologies of information and communication. The growing risk of a social and educational polarization has become more evident. Only a small part of the world population can have access to the most sophisticated developments and uses of literacy, including the use of electronic mail and Internet for the sake of daily communication. The majority of populations have almost no access to the elementary forms and levels of literacy or they don't have any access at all. [6]

6. INFORMATION LITERACY

In the schools of the most developed countries, information literacy has been incorporated in the teaching elements concerned with the development of attitudes and aptitudes to access and use information, with the purpose of forming an *information literate society*. Information literate people:

- Have learned how to learn;
- Know how to organize information;
- Are capable of locating the information they need; and
- Know how to use information in such a way that others can learn from the information they have generated.

In other words, as José López Yepes has defined the information literate as, "individuals capable of documenting for people and for themselves daily life, which is to say, something like an "*homo documental*,"⁷ an informed and information-creating individual. In order to achieve this utopian state, the individual's quintessential role *lies* in his/her capacity to select, find, and organize information in a personal way so that it can be useful, profitable and usable, according to the author's expectations.

6.1. Information Literacy to Improve Reading and the Information Culture

Historically, the ideal, classic, and conventional way man has developed to create new knowledge and preserve existing knowledge continues to be, undoubtedly, through reading and writing. Modern information and telecommunications technologies support this ideal, and even further, can be said to virtually "force" the citizens of information societies to acquire greater and better information literacy skills in order to survive and prosper. Certainly, since ancient times, the world's educational institutions are responsible for teaching reading and writing skills. Nevertheless, ironically, too many schools and too many teachers seem to have fallen back on the least common path of

⁶ UNESCO

⁷ López Yepes, José. *Los caminos de la información: cómo buscar, seleccionar y organizar las fuentes de nuestra organización personal*, 1997, Madrid, Fragua, pp. 24-25.

resistance - - mechanical reading skills. They are reinforced and protected by obsolete pedagogical systems that avoid reasoning and free thinking as valued pedagogical objectives, much less the formulation of hypotheses and the joy of the discovery of new knowledge, or the wider application and utilization of existing knowledge, as a result of experimenting with these hypotheses.

Because of these trends and outmoded concepts, citizens from less developed countries, especially, have very serious difficulty in writing, and in recording information properly so that it is easily indexed, retrieved and accessed as well. The lack of a truly "informative culture" prevents the individual from periodically updating information, documenting it, and bibliographically preserving and conserving it. Moreover, this dysfunctional culture limits the easy and efficient flow of information throughout societies and all sectors, except perhaps in the limited arena of legally required public information. In short, societies cannot efficiently resolve their chronic political, economic, and social problems because they cannot bring to bear the required informative resources, either because such resource do not indigenously exist, or because they are not available and accessible, or because they are obsolete, or because individuals cannot understand and interpret the contents because of low information literacy competency. These barriers account for why societies neither seem to have the will nor the intention of improving himself or herself.

6.2. A New Information Literacy Conceptualization is Required

A new conceptualization of information literacy is, therefore, certainly needed. But it must be designed, developed, and introduced in such a way that a new permanent and enduring culture of information can be built, with the purpose of educating citizens as to their responsibilities of both informing others, and becoming well informed themselves, for the benefit of both society at large, and for their own immediate benefit. The ultimate goal is that reading, writing, values and ethics all constitute a part of the information literacy equation, and must be combined in such a way that an enduring and permanent new culture of information can be created.

The author therefore proposes that the following core attitudinal and behavioral competencies and qualities must be emphasized and strengthened in order for countries to more readily be conditioned for, and then adopt a national information literacy program model:

- Aptitudes to interpret in a critical and productive way the meaning of what people read;
- Communication and verbal articulation skills, including the ability to transmit and tailor messages by many different means and to many different audiences;
- Capacity to document in different environments the activities of the individual's performance at work;
- Capacity to record, preserve, and make permanently publicly accessible documentation for both the present and for future generations;
- Respect for the principles and ethics of the rights to information, especially public information, including intellectual property ownership;
- Capacity for enjoyment of reading;
- Encouragement of the pleasure of reading in the family environment; and

- Frequent use of public and private libraries, archives, museums, and documentation centers as key information institutions.

The working (preliminary) definition of *information literacy* proposed for the Meeting of Experts already takes into account:

- Knowing when an individual has a need for information,
- Identifying information needed to address a given problem or issue,
- Finding needed information,
- Evaluating information once retrieved,
- Organizing the information,
- Using the information effectively to address the problem or issue at hand.

The following additional technical competencies are proposed:

- Comprehension of different types of text,
- Critical analysis of the content,
- Correlation of information from among different sources or origins,
- Formulating questions from an assimilation of a text,
- Enrichment of the linguistic patrimony (as capital stock)
- Reading of recreational literature,
- Increasing the total number of books being read per benchmark period,
- Updating of specialized knowledge,
- Structuring and writing of texts with traditional formats and hypertext links.

As part of the new information culture, it will not be enough to circumscribe recommendations exclusively on the basis of technical skills. It is essential to strengthen the underlying informative infrastructures so as to guarantee equal opportunities to all citizens—in short, assert a broad public right to information as a global public good.

The author also recommends the need for a fundamental redefinition and expansion of the traditional functions of libraries, archives, museums, documentation centers, and other information institutions so that they are not exclusively considered to be simply a source of information and knowledge, but can begin to play a stronger and more pervasive role in the information society. They must, and are perfectly capable of contributing not only to the traditional education of the individual as a reader, but also to helping individual become more informed and "documented." In other words, to identify governmental and political actions necessary to reform the role of information institutions (not just schools) insofar as they relate not just to the improvement of reading habits, but also in the area of strengthening the availability and accessibility of documental and bibliographical resources necessary to assist in meeting the informative, educational and recreational needs of all individuals, with equal opportunities for all, or "Information for All" as UNESCO says.

In short, a re-invigorated national information culture must be prevented from being subverted, and held captive by the consumption-of-goods laws of traditional cultures, and at the same time avoid the deterioration of the quality of life.

7. CONCLUSION

The information literacy aptitudes necessary to achieve critical and productive basic reading levels must be achieved first, because they are a pre-condition to achieving the more advanced information literacy levels. Certainly it is possible to master some skills in order to access some information in a limited area where the individual already has some knowledge. However the more generalized capacity to acquire and improve knowledge and competency in any field other than the specialized one the individual already enjoys an advantage it, will suffer. In other words, there cannot be a "true" information culture required by the envisioned information society without reforms in the attitudes and aptitudes that encourage reading as a productive and enjoyable activity. This ultimate goal can only be achieved if an individual's thirst and desire for acquiring knowledge has "surfaced" and is cultivated.

The author would like to make clear that the acquisition of erudite knowledge, while certainly an edifying experience, is not the only pleasure that human beings can derive from widening their information horizons. The very act of a reader going deeper and deeper into the pages of a text, to critically evaluate it, to study and scrutinize it, while perhaps not inevitably, but certainly very frequently, results in the reader finding something meaningful. Such "encounters" allow the reader to discover something unknown, or something that was known, but in a different way. It is through such encounters that the reader learns about the pleasure of knowledge, and from it the fountain from which new dreams are born. Information literacy is therefore a strategic skill for mankind because self-discovery is a pre-requisite to social and economic development.

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Appendix

Relationship Between Reading, and Libraries and Other Information Institutions

1. Recognizing the need for information

- Doubts will merge in the same way that reading is going deeper into the text, that is, to scrutinize in order to understand and question the text; and in the same way that the subject reader has a wider reference point (information, knowledge) with which he can compare the text content.
- The learning process would have to be oriented to create controversy and to contrast the truth so that questions can be derived that, by means of reading and the use of informative sources, leads the individual to new statements and problematic issues as well as to open new interrogations.

Thus, it is created a continuity between reading and opening of the text by means of contrasting, relation, addition of knowledge, from which information needs will be derived in order to step forward in the learning process.

2. Knowing how to formulate questions by means of keywords, relevant and pertinent concepts and according to precise and unambiguous phrases, based on information needs.

- The reader familiar with the library is trained to formulate his/her questions. This is an exercise that the reader continues to improve while he/she interacts with skillful librarians at the consulting interview. That is how the reader is being trained.
- Training in order to formulate questions is becoming more fluent in the same way that the reader uses different informative and documental sources.

3. Identifying information resources

- This knowledge is also acquired in the library, where there are available different types of subject-matters and sources, primary as well as secondary, printed, audiovisual and digital ones. Internet is included among them.
- Knowledge of the sources and library services provides the extent, accountability and the type of information the reader may obtain according to his/her different questions.

4. Formulating search strategies based on the information resources being researched

- The reader must be clear about when, what information and what depth level he/she needs, that is, the opportunity and the pertinence.
- To know the principles upon which the information organization rests.
- To know the characteristics of the physical means, specifically the digital ones.

5. Locating and accessing information

- To recognize when help or any intervention from the specialist on library and information is needed.
- To be able to combine sources of information.
- To know how library services work.
- To know the terms of the copyrights.
- To handle the different ways of information transfer.
- To know the access points to information sources.
- To know the different Internet search programs.
- To create data bases and personal directories.

6. Evaluating information quality and pertinence

- The library must have quality criteria that facilitate the reader the identification of reliable sources.
- The library must state explicit and publicly the quality criteria it uses to assess information sources.
- The library must have available sources to help the reader.
- The reader must be certain about the quality of the source that provides the information.
- The reader must confront the information with other colleagues.
- The reader must cooperate with the library according to the development of collections.