High-Level Colloquium on Information Literacy and Lifelong Learning
Bibliotheca Alexandrina, Alexandria, Egypt
November 6-9, 2005

Report of a Meeting
Sponsored by the United Nations Education, Scientific, and Cultural Organisation (UNESCO), National Forum on Information Literacy (NFIL) and the International Federation of Library Associations and Institutions (IFLA)

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A. THE ALEXANDRIA PROCLAMATION

BEACONS OF THE INFORMATION SOCIETY

THE ALEXANDRIA PROCLAMATION ON INFORMATION LITERACY AND LIFELONG LEARNING

Celebrating this week's confirmation of the site of the Pharos of Alexandria, one of the ancient wonders of the world, the participants in the High-Level Colloquium on Information Literacy and Lifelong Learning held at the Bibliotheca Alexandrina on 6-9 November 2005 proclaim that Information Literacy and lifelong learning are the beacons of the Information Society, illuminating the courses to development, prosperity and freedom.

Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations.

Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment for shared benefit. It assists them and their institutions to meet technological, economic and social challenges, to redress disadvantage and to advance the well being of all.

Information Literacy

- comprises the competencies to recognise information needs and to locate, evaluate, apply and create information within cultural and social contexts;

- is crucial to the competitive advantage of individuals, enterprises (especially small and medium enterprises), regions and nations;

- provides the key to effective access, use and creation of content to support economic development, education, health and human services, and all other aspects of contemporary societies, and thereby provides the vital foundation for fulfilling the goals of the Millennium Declaration and the World Summit on the Information Society; and

- extends beyond current technologies to encompass learning, critical thinking and interpretative skills across professional boundaries and empowers individuals and communities.

Within the context of the developing Information Society, we urge governments and intergovernmental organisations to pursue policies and programmes to promote Information Literacy and lifelong learning. In particular, we ask them to support

- regional and thematic meetings which will facilitate the adoption of Information Literacy and lifelong learning strategies within specific regions and socioeconomic sectors;

- professional development of personnel in education, library, information, archive, and health and human services in the principles and practices of Information Literacy and lifelong learning;

- inclusion of Information Literacy into initial and continuing education for key economic sectors and government policy making and administration, and into the practice of advisors to the business, industry and agriculture sectors;

- programmes to increase the employability and entrepreneurial capabilities of women and the disadvantaged, including immigrants, the underemployed and the unemployed; and

- recognition of lifelong learning and Information Literacy as key elements for the development of generic capabilities which must be required for the accreditation of all education and training programmes.

We affirm that vigorous investment in Information Literacy and lifelong learning strategies creates public value and is essential to the development of the Information Society.

Adopted in Alexandria, Egypt at the Bibliotheca Alexandrina on 9 November 2005

B. COMMENT BY DR. PATRICIA SENN BREIVIK,
Chair Emerita, The National Forum on Information Literacy

"**Prague and Alexandria: Steps Toward Social Inclusion**"

All of us benefited from the rich experiences of people from around the world who are committed to furthering the goals of Information Literacy and lifelong learning. These people brought to the table the political successes of Finland, the sensitivity to oralcy from Sub-Sahara Africa, the research on Information Literacy in the workplace from Australia and much, much more. What we all shared was a belief in the power of Information Literacy abilities to promote social inclusion for all people within today's Age of Information.

Together these events provide a solid foundation and direction for the next steps in the pursuit of this goal. The outcomes of the Prague event laid the theoretical foundation for international collaboration in promoting Information Literacy as an essential set of abilities in the 21st century with the provision of over 30 papers and the discussion of a broadly based group of professionals. The Alexandria colloquium took those outputs and began the process of developing practical agendas for raising awareness and promoting Information Literacy and lifelong learning skills.

But what has been learned thus far that compels further efforts? There have, in fact, emerged some clarion calls on behalf of the have-nots and disenfranchised of our world. These include the following:

- It is time to move from "Information for All" to "Information Literacy for All."
- Information literacy abilities are essential for social inclusion in today's information-driven world.
- Information literacy and lifelong learning are of the same essence.
- Information literacy is not a technology issue but a learning issue.
- Information Literacy is more than a library or education issue. It is crucial to issues of economic development, health, citizenship and quality of life.
- Information literacy is part of a continuum of literacies that includes oralcy.
- Information literacy is context specific to particular cultures and societies.

To enhance the likelihood of significant progress there also emerged from Alexandria a plan for next steps:

- Five regional meetings to explore the distinctive challenges of the regions and to collect professional insights and best practices to share with others,
- Four international conferences which build upon the sector specific (education & learning, economic development, health & human services and governance & citizenship) papers and discussions from the regional meetings along with the sector specific outcomes from Prague and Alexandria, and
- A world congress that builds upon all of the above to the end of raising global awareness of Information Literacy as part of the human right to lifelong learning.

In addition, a number of issues of practical concern were clarified over the course of these two events, and these can be useful for further international and national programs on Information Literacy. They include the following:

- Policy makers must be targeted in efforts to promote Information Literacy. (With the exception of Finland, national policy makers remain largely unaware of Information Literacy.)
- Information literacy champions—outside of library and education—must be identified and cultivated.
- NGOs must be targeted as likely partners in the promotion of Information Literacy.
- Future international and national Information Literacy conferences need to involve professionals from a wide range of backgrounds.
- Information literacy's importance to economic development is the key factor to use in promoting Information Literacy.
- Research is needed--particularly to document the value of Information Literacy to social inclusion and its value to economic development.
- The International Alliance for Information Literacy needs to be expanded in membership and further empowered.
- The importance of Information Literacy to the well being of nations and individuals requires national and international collaborations so that redundancy of efforts is minimized and limited resources are efficiently utilized.

These combined insights from Prague and Alexandria should be helpful to Information Literacy efforts around the world. The goal to which we should mutually pledge ourselves is to ensuring that all people are well prepared to seek the truth so that all may experience a better quality of life.

C. ACKNOWLEDGEMENTS

The three main sponsors—without whom the colloquium could not have occurred—and their representatives were:

- Abdelaziz Abid, United Nations Education, Scientific, and Cultural Organisation
- Alex Byrne, International Federation of Library Associations and Institutions
- Patricia Senn Breivik, National Forum on Information Literacy

In addition to their behind-the-scenes work, all three representatives were actively involved in the Alexandria discussions, and they took the lead in developing "The Alexandria Proclamation."

Other major support for the colloquium was provided through the generosity of the Bibliotheca Alexandrina and its Director, Dr. Ismail Serageldin, Diane and Lee Brandenburg of California, USA, Information Today, Inc., and the U.S. National Commission on Libraries and Information Science (NCLIS).

Special thanks also goes to Jill Cody for serving as facilitator of the event, Sarah Devotion Garner for serving as recorder, report editor and press liaison and Sohair Wastawy for serving as the primary liaison with the Bibliotheca Alexandrina. Particular gratitude must be expressed for Forest Woody Horton, Jr., who so ably coordinated all the logistics necessary to the event and intellectually participated in it.

Finally, of course, our gratitude goes to the awesome professionals who assembled and organized regional teams, offered presentations, participated in discussions and in the drafting of recommendations and the Alexandria Proclamation.

D. EXECUTIVE SUMMARY

This Report is prefaced by The Alexandria Proclamation, and consists of Dr. Patricia Senn Breivik's summary of outcomes, "*Prague and Alexandria: Steps Toward Social Inclusion,*" and the acknowledgements in Part C. Part D, this executive summary, highlights the discussion and recommendations made by the meeting participants. Part E consists of the Recommendations formulated by the Colloquium participants. Part F, which consists of Appendices, including key speeches made by distinguished guests, a list of meeting participants, the programme agenda, and concludes with an edited transcript of the Colloquium proceedings to facilitate readers obtaining more detail on issues of particular concern to them.

The High-Level Colloquium on Information Literacy and Lifelong Learning was opened by Dr. Patricia Senn Breivik, who provided a set of "Information Literacy givens" as a framework for discussions, and Mr. Abdelaziz Abid, who discussed the importance of Information Literacy and particularly the importance of teachers.

The first Sector Discussion, *Education and Lifelong Learning*, presented six propositions regarding Learning & Education and Information Literacy, which reflect conditions that underpin the relationship between Information Literacy and student learning outcomes that should flow on to lifelong learning and community participation. The Regional Team Leaders discussed both problems and best practices within their own regions, such as the Bologna Process's effect on Europe as well as differing levels of achievement in the old and new European member states, the effect of SARS and the December 2004 tsunami on Asia, immigration and pockets of poverty in North America, oralcy, HIV-AIDS, the Sub-Saharan African need to address how people learn Information Literacy when they are not educated in the Western system, and the effects of trying to move into a Knowledge Society in different parts of the Middle East and North African region. An open discussion by all participants followed, where the conversation clustered around themes such as the need for collaboration; working with traditional/formal partners, but also with Non-Governmental Organizations and others; standards; need for strategic planning, assessment and the move from Information for All to Information Literacy for All. The Sector co-lead Sector Experts were Dr. Barbara Cambridge and Dr. Penny Moore.

The second Sector Discussion, *Health & Human Services*, focused on the importance of Information Literacy in health and human services and discussed issues and considerations for healthcare practitioners, health care managers, policy makers, patients and the wider public. Participants were challenged to think about what might be done to advance Information Literacy, both conceptually and practically. The regional panellists, as well as participants in the open discussion, discussed areas in which they wished for more help and shared many good examples of successful ideas and models. They emphasized the importance of culture and the individual's environment, as well as the need for continuous learning and professional development. It became clear that Health Information Literacy had more aggressive outreach aspects than general Information Literacy efforts. The Lead Sector Expert was Dr. Phil Candy.

Economic Development, the third Sector to be discussed, framed Information Literacy as fundamental for economic development, as economies work on information and transmission of information. The International Federation of Library Associations (IFLA), the World Summit on the Information Society, and the UN Millenium Goals were examined in detail. Strategies were offered for the participants to use, and a "pull" approach rather than a traditional "push" approach to evoke change was advocated. Regional discussions centred on the difficulties in sharing information in environments where having knowledge is equated with personal power and where inequities in opportunity, access and education exist. The open discussion was focused on empowering people to be able to locate, evaluate and use information effectively. The most common thread was empowering small and medium businesses and their owners--including home-based workers. Other topics included culture, need to do research, importance of assessment, collaboration and partnership and the need for strategic planning within the context of the funding priorities of agencies and governments. Dr. Alex Byrne served as Lead Sector Expert.

The final Sector Discussion, *Governance & Citizenship*, focused on how to position ourselves in interacting with politicians on the local, state and national level. The impact of Information Literacy, or lack of it, on existing public policy was addressed. The necessity of developing specific skills such as strategic planning and negotiation was stressed. Members of the Governance & Citizenship team commented on how to empower individuals to be effective citizens through Information Literacy. The Regional and Open discussions included the following topics: how to deal with politicians, the influence of international and national organizations at the national level, and the shift required by nascent democracies to move from a society in which information is controlled to a society where information is freely available. Mrs. Martha Gould was the Lead Sector Expert.

Four working groups, one per sector, drafted recommendations, which were reviewed and revised by all participants in an open session. They identified promising implementation and communication strategies that are working well in individual countries and may offer models that can be utilized by many countries or perhaps even by an entire region. These efforts also complement UNESCO's key Information Literacy and lifelong learning policy and programme goals, such as its Information-for-All Programme (IFAP), Education-for-All-Programme (EFAP); and the initiatives being undertaken under the umbrella of the UN Literacy Decade (2003-2012).

The meeting culminated with the creation and adoption of *The Alexandria Proclamation*, the lead-in document in this Report, which urges governments and international organisations to pursue policies and programmes to promote Information Literacy and lifelong learning because they are essential to inclusion, economic development and quality of life in today's Information Society.

E. RECOMMENDATIONS

1. Context for the drafting and acceptance of recommendations

The colloquium discussions were challenged by intertwining issues of: (1) information and Information Literacy, (2) generic aspects of Information Literacy and its contextualised manifestations, (3) supply of and demand for Information Literacy programmes and interventions, (4) detailed but not especially helpful divisions between types, sources and channels of communication and (5) slippages between inputs (or preconditions) and desired outcomes. Dr. Candy reiterated that one person's outcomes is another's precondition and that supply of information is not the same as demand for Information Literacy

There was agreement that recommendations must: (1) present a compelling vision of the future while preserving the "memory of the world", (2) be framed in the context of the next steps, (3) be linked to existing high level protocols, agreements and statements upon which there already is agreement, (4) recognise that people have different reasons both for advocating and engaging in Information Literacy; (5) recognise that Information Literacy has generic as well as domain specific aspects; (6) create an irresistible demand for Information Literacy programmes and interventions; (7) focus on the international or supra-national level, (8) create a context in which others can better act locally; (9) acknowledge the different political, technological and cultural realities in different parts of the world and (10) identify potential networks and partnerships with which to work.

The following sets of recommendations came from the work of small group teams. Their recommendation drafts were then reviewed by all participants in open discussions; recommendations not receiving general consensus were omitted. Formats vary in keeping with the styles adopted by each team. In some cases recommendations address issues somewhat beyond the focus of the colloquium but are important and closely related to Information Literacy and lifelong learning (e.g., information access). These have been left intact among the other recommendations.

2. Learning & Education Recommendations

The Education team reiterated that Information Literacy is a part of Lifelong Literacy, holding that:

- Information literacy is an essential feature of lifelong literacy in any information society.
- Developing habits of inquiry in everyday life and in informal education supports Information Literacy.
- Formal education supports Information Literacy by including instruction and practice in all subject areas at all educational levels.
- Information Literacy is a part of Lifelong Literacy Society.

Features of the Following Recommendations

The following recommendations support the centrality of Information Literacy in lifelong literacy by acknowledging habits of inquiry developed in informal education, community activities, the workplace and formal education. They suggest initiatives in each of these areas of activity by a variety of stakeholders. Those responsible for the actions are listed in parentheses following the recommendations.

Recommendations concern the following and are followed by recommended action items.

- Educator preparation and professional development
- Evidence based decision making
- Active pedagogical practices
- Nourishing educational environments
- Information literacy requirement in assessment and accreditation

Recommendation #1

Educator preparation and continuing professional development are keys to improving learning outcomes through Information Literacy.

Recommendation #1 action item A
Develop programmes for educators including schoolteachers, librarians, faculty members, mentors, parents, grandparents and community workers about the importance of Information Literacy and lifelong learning in society.
(Educational institutions, ministries of education, NGOs, community-based agencies, family support agencies)

Recommendation #1 action item B
Charge teachers to write student-learning outcomes involving Information Literacy.
(Schools of education, education institutions including schools, colleges, universities)

Recommendation #1 action item C
Develop and update Information Literacy and lifelong learning materials, models, and workshop formats for use at different levels: local, national and regional.
(NFIL, IFLA, UNESCO)

Recommendation #2
Decisions concerning educational policies, pedagogies, and practices should be based upon research evidence examining the relationship among Information Literacy, educational achievement, and specific learning outcomes.

Recommendation #2 action item A
Include in assessments of human development levels conducted by international or national agencies criteria and indicators about Information Literacy based on evidence from research. (UNDP, World Economic Forum, World Bank, IFLA, UNESCO, and others)

Recommendation #2 action item B
Encourage research agencies in different countries to include the Information Literacy level in their research assessing educational achievement and outcomes.

Recommendation #2 action item C
Support coherent programmes of research to reveal long-term effects of Information Literacy on student learning, adult education in formal, informal and community settings and lifelong learning. (Funding agencies, colleges and universities, national research agencies, IFLA research initiatives, UNESCO research initiatives)

Recommendation #2 action item D
Present evidence in ways that meet the information and problem-solving needs of policy makers and practitioners. (Researchers, educational institutions, agencies using research, governmental institutions using research, community agencies using research)

Recommendation #3
Implement active pedagogical practices such as problem based learning, service learning and constructive learning that are both in support of and well supported by the practice of Information Literacy. (Educational institutions, community-based agencies)

Recommendation #3 action item A
Cultivate habits of inquiry that support the purpose of Information Literacy.
(Parents, grandparents, caregivers, teachers, governmental agencies, professional associations)

Recommendation #3 action item B
Adapt pedagogical practices to the needs of particular groups such as women, special needs people, indigenous populations, prisoners and immigrants.
(Educators in informal and formal education, service providers, adult educators)

Recommendation #3 action item C
Assess these pedagogical practices in terms of the degree of enhancement of needed values such as generosity, resource sharing, and social responsibility, respect of the other, professionalism, and ethical behaviour.
(Researchers, assessors, evaluators, accountability agencies)

Recommendation #4
Create educational environments that nourish Information Literacy including appropriate infrastructure, knowledgeable leadership, supportive policies, productive partnerships and a learning culture.
 (Funding agencies, national governments, civil society, educational institutions, private sector)

Recommendation #4 action item A
Coordinate Information Literacy initiatives across different countries in a region and across regions, and make use of best practices.

Recommendation #4 action item B
Include in an appropriate infrastructure a functional library, community networks and supportive ICT.

Recommendation #4 action item C
Raise awareness of policy makers on the importance and ways of including Information Literacy in formal and informal education.

Recommendation #4 action item D
Train school administrators in the establishment of Information Literacy initiatives.

Recommendation #4 action item E
Recognise the principles of Information Literacy in matters of intellectual property that govern access to information.
(Governments, international regulatory bodies, educational institutions)

Recommendation #4 action item F
Create programmes for active education and training of the public.

Recommendation #4 action item G
Disseminate messages linked to Information Literacy and information culture using channels most effective in each setting such as oral transmission, printed, audio, visual or electronic media.

Recommendation #5
Require Information Literacy as a significant criterion in student and teacher assessment and institutional accreditation.
(Educational institutions, accreditation agencies, government authorities)

Recommendation #5 action item A
Train educators about student assessment practices that focus on Information Literacy outcomes.
(Educational institutions, accreditation agencies, government authorities)

Recommendation #5 action item B
Associate standards for assessment and accreditation of Information Literacy with learning outcomes rather than inputs and processes.
(Educational institutions, accreditation agencies, government authorities)

3. Health & Human Services

Preamble: *Why Health Information Literacy is Vital*

In the context of a universal commitment to enhanced quality of life, all citizens have a right to good health and to healthcare based on informed consent, which is reaffirmed and supported by this declaration. In support of this right, we reaffirm the entitlement of all citizens to access information that is relevant to their health and the health of their families and communities. In particular we refer to the necessary protection of the mother and the child as embodied in the Universal Declaration on Human Rights, to the rights of children to have access to information about health as enshrined in the United Nations Convention on the Rights of the Child (Article 26), and to the rights of all people to have sufficient information and understanding to give informed consent to treatment.

Recommendation #1: Access to Health Information
That all nations ensure the development and enhancement of health and healthcare information infrastructure, including the provision of courses, programmes, publications, websites, information centres and interventions to enhance the health Information Literacy of all citizens without exception.

Recommendation #2: The General Public
That targeted attention be given to the needs of young people (in school and outside), women, men, the elderly, vulnerable groups including the handicapped, immigrants, the unemployed and those with particular needs, those in hazardous occupation or dangerous locations, and the general public.

Recommendation #3: The General Public
That each country develop an integrated curriculum from pre-school and throughout the years of formal schooling to develop in children and young people a recognition of the relationship between their environment, their own actions and their health to encourage and empower them to take responsibility for their own health and well being.

Recommendation #4: The General Public
That partnerships be established or strengthened with existing networks especially those involved in the development and distribution of health information. This may include The World Health Organisation (WHO), NGOs with responsibility for health, wellbeing and public health, regional groups like Association of Southeast Asian Nations (ASEAN), EU and Organisation of Economic Co-operation and Development (OECD).

Recommendation #5: The General Public
That, in the context of public health education, use should be made of established channels of communication including radio (talkback and open-line programmes),

television, newspapers and journals, and telephone help lines, not only to distribute information about health, but also to strengthen Health Information Literacy.

Recommendation #6: Patients and Caregivers
That patients and their caregivers (usually but not always family or other community members) be encouraged and empowered to ask questions to clarify their understandings so that they can give informed consent, and be provided with contact details to follow up in the event that they have questions or concerns that occur to them after the clinical consultation or in the course of treatment. Such referral should include patient advocacy and self-help groups.

Recommendation #7: Patients and Caregivers
That particular attention be paid not only to the provision of high quality, easily understood information in a variety of forms but also to ensuring that those undergoing treatment (and their caregivers) understand fully both the likely progress of the treatment and the need for any compliance or conformance that the clinician expects of them.

Recommendation #8: Healthcare Practitioners
That, recognizing the growing importance of evidence-based practice in healthcare, those responsible for devising and delivering the initial training of healthcare practitioners give specific and explicit attention within the curricula to the development, enhancement and demonstration of Information Literacy attitudes, expertise and behaviours.

Recommendation #9: Healthcare Practitioners
That nations and in particular the health authorities and professional associations within those countries, with the assistance of international and translational bodies and agencies, ensure the ongoing availability and assessment of continuing professional development in Health Information Literacy of those already in practice and, where appropriate, make this a requirement for continuing licensure to practice.

Recommendation #10: Healthcare Practitioners
That medical, nursing and allied health professionals and para-professionals be trained to improve the Health Information Literacy skills and practices of their patients and communities and, in doing so, to recognise the need for sensitivity to the age, gender, educational level, religious convictions and ethnic and cultural backgrounds of those with whom they are dealing.

Recommendation #11: Health Administrators and Policy Makers
That those responsible for the education and training of health administrators ensure that basic and advanced curricula include a developmental sequence of Health Information Literacy practices and skills.

Recommendation #12: Health Administrators and Policy Makers

That national health authorities, in conjunction with relevant professional associations, take steps to ensure that policy-makers and administrators are equipped with appropriate skills of Information Literacy to allow them to make high quality, evidence based decisions and to fulfil their responsibilities skilfully with regard to the human dignity of clinicians, patients and the public at large.

Recommendation #13: Professionals engaged in promoting Health Information Literacy

That a central repository of high quality Information Literacy practice be established, to be accessed by practitioners from around the world. Such Information Literacy Practices could include courses and programmes, documents and brochures, websites and forums, conferences and meetings, places and spaces, awards and accolades, and toolkits and resources.

Recommendation #14: Professionals engaged in promoting Health Information Literacy

That items for inclusion in the best practice database be quality assured by an international editorial panel; that the best practice database link with a discussion forum and professional association for practitioners, that a dedicated fund be established, along with a Roster of Experts willing to address suitable high-level conferences, and that resources be provided to support their attendance at events in developing countries and economies.

Recommendation #15: Professionals engaged in promoting Health Information Literacy

That research be undertaken into the information-seeking practices of different kinds of information users (such as health professionals or members of the general public), to provide a basis for the design of Information Literacy interventions.

4. Economic Development

The team took into consideration twin driving forces: economic development is a driver for Information Literacy AND Information Literacy, in turn, is a driver for economic development. Information Literacy should be imbued as part of information society development initiatives of a country.

Introduction

Under current globalization trends, economic development is becoming increasingly dependent upon the use of information and the learning skills of the workforce. Governments should lead Information Literacy efforts through strategic alliances with the major stakeholders, including the business community in key economic sectors, and consumers. The target groups/institutions are key stakeholders, government, business entities, educational institutions, information producers and providers, trade and business organisations, chambers of commerce, industrial associations and NGOs.
The key target communities are businesses (SMEs and large companies), public administration and specific target communities such as unemployed, women, start-ups, minorities, immigrants, and consumers.

Recommendation #1
Businesses, government and educational organisations should develop a strategic plan for Information Literacy.

Recommendation #2
International organisations, such as UNESCO, OECD, World Bank, and International Monetary Fund (IMF) need to require educational reforms to favour lifelong learning in the different countries.

Recommendation #3
Government and business organisations need to establish environments that ensure transparency (full disclosure).

Recommendation #4
Lead agencies should promote Information Literacy awareness/culture through the media.

Recommendation #5
Establish a strong partnership/alliance with information providers and producers to foster Information Literacy programmes (e.g., develop, train, sponsor).

Recommendation #6
Business groups/trade associations/professional bodies/chambers of commerce should develop toolkits, training and market driven programmes according to the specific needs and existing Information Literacy skills of target communities.

Recommendation #7
Governments should designate a lead agency to spearhead the development, deployment, and measure the impact of Information Literacy programmes (e.g., ICT agencies/initiatives exists to capitalize/leverage on them).

Recommendation #8
Lead agencies should coordinate the creation of a repository of who's who, best practices, experts, tools, relevant content, etc., at the country, regional and international levels.

Recommendation #9
Professional organisations should identify and cultivate champions in government, business and economic development to adopt and propagate Information Literacy.

Recommendation #10
Information Literacy and lifelong learning initiatives should be formulated in the context of information society development and national agendas for culture, science, technology, innovation and development.

5. Governance & Citizenship Recommendations

The objective is to empower people to actively participate in governance and citizenry and to control their own lives, respecting cultural diversity in both oral and digital societies as a public good. The target audience consists of political and civic leaders, NGOs, community groups, government agencies (national and international), international foundations, libraries, labour unions, educational institutions, business and industry, media.

Recommendation #1
Urge national governments to create national councils to promote an information culture.

Recommendation #2
Urge national governments to designate a lead agency for the implementation of Information Literacy and lifelong learning initiatives in consultation with education, ICT and other relevant departments.

Recommendation #3
Urge educational institutions and libraries to create programmes that would produce information literate citizens.

Recommendation #4
Urge business, industries and labour unions to develop standards for an information literate workforce.

Recommendation #5
Urge governments to create Information Literacy and lifelong learning programmes aimed at the unemployed to improve employability.

Recommendation #6
Encourage governments to make public domain information easily accessible and to encourage broader involvement in the digitization and preservation of public domain information.

Recommendation #7
Urge national governments, educational institutions, libraries and other agencies to develop and disseminate civic educational programmes to children, youth, and adults.

Recommendation #8
Urge national governments to develop training programmes in Information Literacy and civic education for immigrant populations.

APPENDIX 1

Remarks, delivered by Dr. Ismail Serageldin, on behalf of Mrs. Anwar Sadat, at the Hilton Restaurant in the Bibliotheca Alexandrina in Alexandria, Egypt at a Welcoming Dinner for Meeting Participants and guests on Sunday evening, November 6, 2005.

"Dear participants of the High-Level Colloquium on Information Literacy and Lifelong Learning, and guests.

I understand from your organizers that you have gathered here at one of the world's most prestigious knowledge institutions — the Bibliotheca Alexandrina — for the purpose of sharing your ideas on how to cope with mankind's most critical and ageless challenges - - disease, poverty, instability, and especially illiteracy. While everyone seems to agree that information and communication technologies are powerful tools that certainly can help, we must learn much better how to harness those technologies in the service of human communication and endeavours, not the other way around. If I understand correctly the goals for your meeting, that is where Information Literacy and lifelong learning come in.

I am told that you come from all of the major regions of the world, and from many different backgrounds, representing many diverse races, religions, ethnic groups and cultures. All of that is to the good, because only through a free and open interchange of different approaches, taken under widely diverse circumstances and conditions, and advocated by champions from many walks of life, can a consensus be reached on the best ways to move forward.

I had hoped very much to be with you on this memorable evening. But, unfortunately, I could not. Nevertheless, you have my personal assurances that what you are doing for mankind in these few days you are together is absolutely crucial if all peoples, all lands, and all cultures are to live and work together in harmony, and in productive endeavours, in the 21st Century.

Please look around you while you are in my beautiful homeland of Egypt - - perhaps walking along the seaside in this lovely city of Alexandria, or exploring ruins, or just enjoying the sights.

I pray that you will be inspired by one of the oldest civilizations on earth. May our ancient and honourable traditions encourage and embolden you to share your opinions and your visions freely with each other during your meetings.

The Lamp of Learning still burns brightly in Egypt, even after thousands of years of turmoil and challenge. And I hope you will take that centuries-old flame and spread it far and wide so that your seeds of wisdom will enlighten and educate all of those in need - - children and adults alike.

Good luck with your deliberations, and God bless you all.
Mrs. Anwar Sadat"

APPENDIX 2

Mr. Abdelaziz Abid's opening remarks at the opening session of the Colloquium, Monday, November 7, 2005.

Information Literacy has become a global issue and many Information Literacy initiatives have been documented throughout the world. These programmes address many concerns related to technology and information skills. In education, teachers, librarians and others are working to integrate information skills instruction into the curricula to achieve relevant learning outcomes. Other initiatives involve distance education, research and publication activities related to Information Literacy. Employers and policy makers are addressing the need for Information Literacy as part of workforce development to ensure that workers develop appropriate technology and information skills to handle their job responsibilities productively and effectively.

Information Literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments and to all levels of education, while recognizing the disparities in learning styles and in the nature and development of literacy in different countries.

An effective Information Literacy programme for the whole society should be developed and delivered in two parts: one as part of the formal education, and another as part of an informal education, in course of, and as part of, the day-to-day activities and life of people.

Information Literacy is concerned with teaching and learning about the whole range of information sources and formats.

Education is a human right and a public good. Information Literacy is concerned with teaching and learning about the whole range of information sources and formats.

Each day, over 60 million teachers care for 1 billion children. Yet another 15-35 million more teachers are needed in order for illiteracy to be eradicated and for Education for All (EFA) by 2015 to become a reality. There are still about 800 million illiterate persons in the world today. This figure constitutes 27 per cent of the adult population over 15 years of age in developing countries, two-thirds of which are women. Over 100 million children in the word don't go to school, two-thirds being girls.

The success or failure in meeting the international target of EFA by 2015 will depend largely on the action of governments to improve the quantity and quality of the teaching force. But, the shortage of teachers in both North and South is reaching unprecedented levels. This can be explained by an increasingly challenging and poorly paid profession, which no longer attracts the most talented. While education experts agree that teachers are key to ensuring good quality education, their status, working conditions, career perspectives and professional development have not ceased to plummet. Let us not delude ourselves. Without qualified, competent, motivated and performing teachers, quality Education for All will not be achieved.

Evidence over the past years has clearly indicated that efforts to ensure equal access to educational opportunities and quality education for all must be sustained by wide-ranging education reforms. Such reforms are not likely to succeed without addressing the new roles played by teachers in preparing students for an emerging knowledge-based society. Teachers must have access to adequate training and ongoing professional development and support and be motivated to use new teaching and learning methods and techniques.

Information and Communication Technology (ICT) can create new, open learning environments shifting the emphasis from a teacher-centred to a learner-centred environment; where teachers move from being the key source of information and transmitter of knowledge to becoming a collaborator and co-learner; and where the role of students changes from one of passively receiving information to being actively involved in their own learning. More than any other previous technology, ICT are providing learners access to vast stores of knowledge beyond the school.

It is important to find ways to help teachers effectively navigate their individual paths to the reinvention of their role. Teachers can be empowered to meet these multiple demands by building their repertoire based on authentic professional learning activities.

Two thirds of illiterate people are women. They need focused attention; both for their personal development and the multiple roles they play in society, as mothers and teachers of their children, as contributors to food security, and as income earners of their families.

How to place Information Literacy at the heart of teachers' education and the empowerment of young women? How to make Information Literacy permeating all sectors of activity? These are the challenges ahead of us during these three days.

APPENDIX 3

Remarks delivered by Mr. Tarek Sharif, on behalf of Mr. Omar Sharif, at the Closing Dinner for Meeting Participants and guests on Tuesday evening, November 8th, 2005, at the Syrian Club in Alexandria.

Please accept my father's regrets that he could not be personally with you this evening to help commemorate the very important work which you have been doing to help UNESCO and your other sponsors better serve the educational needs of all the world's children. My father told your organizers that he wanted very much to participate in your meeting these last few days, and had made arrangements to do so. However, work on a new movie has called him to Rome and he asked me to be his stand-in. I am very pleased to be able to be with you this evening on my father's behalf, and also to add my own greetings to those of my father.

These are the words my father wanted me to share with you, and I share in his statements completely.

"A child is perhaps the most fragile and precious entity that our creator has put on the planet. And a child's innocent, inquiring and developing mind is certainly one of the most incredible things we can behold. But one of mankind's greatest tragedies is that the minds of so many children are never enlightened to their full potential, but, instead, are left to stagnate and wither because of the lack of educational opportunities, the lack of meaningful and inspirational jobs, a lack of parental interest and support, and the list goes on. I'm told that the adult illiteracy rate in most countries around the world is greater than 50%.

Your focus—helping children learn to learn throughout their lifetimes —is certainly one of the keys. Motivating a child to learn, creating conditions so that learning becomes a joy instead of a chore, and constantly nurturing and reinforcing both the childhood basic learning process, and then facing the many adulthood challenges of finding a job, raising a family, and dealing with personal and family problems, are all a part of it.

When you come to your final deliberations, bear in mind the need to link your recommendations concerning the learning process closely with considerations of culture, because how people learn, what they learn, where they learn, and when they learn, are all, at their core, matters of ethnic traditions, religious practices, racial beliefs, family values, and social mores. In short, be flexible, and encourage every country and every community to tailor your basic findings to their special and unique circumstances.

I look forward very much to reading your final report, and promise that I shall continue to support your valuable work in the future.

My personal best wishes,

Omar Sharif"

APPENDIX 4

List of Participants at High-Level Colloquium Information Literacy and Lifelong Learning

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**Denotes members of a regional team who were unable to attend the Colloquium, or who were/
are an alternate regional team member not invited because of budgetary limitations.*

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APPENDIX 5

High-Level Colloquium on Information Literacy and Lifelong Learning, Bibliotheca Alexandrina, Nov. 6-9 '05 Programme-at-a-glance

Sunday November 6	Monday November 7	Tuesday November 8	Wednesday November 9
	7:00 Breakfast at Hotel	7:00 Breakfast at Hotel	7:00 Breakfast at Hotel
	8:00 – 8:30 Welcomes, Introduction and Review of Pre-conference Materials and Conference Agenda.	8:0 0 – 8:30 Summary and Review of Previous Days' Accomplishments	8:00 – 8:30 Summary and Review of Previous Days' Accomplishments
	8:30 – 9:30 Overview of *Economic Development and Information Literacy* (Lead Sector Expert)	8:30 – 9:30 Overview of *Learning & Education and Information Literacy* (Lead Sector Expert)	8:30 – 10:00 Overview of Regionally Identified Information Literacy Needs and Presentation of Draft Recommendations for Discussion by All Participants
		9:30– 10:00 Break	
	9:30-10:00 Break	10:00 – 11:30 Panel Discussion of Regional Perspectives on *Learning & Education and Information Literacy* (Regional Team Leaders and Selected Guests)	10:00 – 10:30 Break
	10:00-11:30 Panel Discussion of Regional Perspectives on *Economic Development and Information Literacy* (Regional Team Leaders and Selected Guests)		10:30 – 12:30 Overview of Sector Identified Information Literacy Needs and Presentation of Draft Recommendations for Discussion by All Participants
		11:30 – 12:30 Open Discussion of *Learning & Education and Information Literacy* (All Participants)	
Participants Arrive & Register at their hotels 1:00 – 5:00 Hospitality Lounge Open in Shakespeare Room, lst Floor, Windsor Palace Hotel; all participants should attend	11:30 – 12:30 Open Discussion of *Economic Development and Information Literacy* (All Participants)	12:30 – 2:00 Lunch at BA	
		2:00 – 3:00 Overview of *Governance & Citizenship and Information Literacy* (Lead Sector Expert)	12:30 – 2:00 Lunch at BA
	12:30 – 2:00 Lunch at BA		2:00 – 4:00 Open Discussion of Recommendations from Sectors and Regions, and Adoption of Some for Forwarding to Organizers and Sponsoring Agencies.
3:00-5:00 Afternoon Preliminary Meetings of Sector Experts and Regional Team Leaders at Windsor Palace Hotel	2:00 – 3:00 Overview of *Health & Human Services and Information Literacy* (Lead Sector Expert)	3:00 – 3:30 Break	
		3:30 – 5:00 Panel Discussion of *Governance & Citizenship and Information Literacy* (Regional Team Leaders and Selected Guests)	
	3:00 – 3:30 Break		4:00 – 5:00 Finalization of Alexandria Proclamation
	3:30 – 5:00 Panel Discussion of Regional Perspectives on *Health & Human Services and Information Literacy* (Regional Team Leaders and Selected Guests)	5:00 – 6:00 Open Discussion of *Governance & Citizenship and Information Literacy* (All Participants)	5:00 – 5:30 Conference Wrap-up/Certificate & Award Ceremony
	5:00 – 6:00 Open Discussion of *Health & Human Services and Information*	6:00 – 6:15 Summary of Day's Meeting and Next Steps	5:30 Colloquium Adjourns

	Literacy (All Participants)	7:00-8:30 Dinner together, Syrian Club; Special Greeting From Omar Sharif delivered by his son,Tarek Sharif.	
7:00 Dinner together, Hilton Restaurant, Bibliotheca Alexandrina; Special Greeting from Mrs. Anwar Sadat delivered by Dr. Ismail Serageldin	6:00 – 6:15 Summary of Day's Meeting and Next Steps Dinner – Free Evening.	9:00 Separate Meetings to draft recommendations: (1)Regional Teams (at Metropole Hotel) (2)Sector Leads (at WP Hotel) (3)Organizers (at WP Hotel)	

Edited transcript of Proceedings of High-Level Colloquium on Information Literacy and Lifelong Learning, Bibliotheca Alexandrina, Nov. 6-9 '05

1. Introduction

Thirty participants from 17 different countries, representing all the major geographic regions of the world, met at the Bibliotheca Alexandrina, Alexandria, Egypt, from November 6-9, 2005, to build upon the recommendations made at the Information Literacy Meeting of Experts held in Prague, The Czech Republic, in September 2003.

Under the sponsorship of the United Nations Education, Scientific, and Cultural Organisation (UNESCO), the National Forum on Information Literacy (NFIL) and the International Federation of Library Associations (IFLA), participants built upon the foundations laid by The Prague Report.

1.1 Information Literacy Givens

During the Preliminary Meeting of Sector Experts and Regional Team Leaders on Sunday November 5, 2005, the following "givens" were developed in order to maximize the time and effort available during the Colloquium. All participants understood that the "givens" existed and, therefore, did not need to be issues requiring debate during the course of the Colloquium.

- Information Literacy is too important to be left to any one institution, agency or profession; collaboration is essential.

- Information Literacy needs to be approached within the context of people's cultural values, societal groupings and personal information needs.

- Information Literacy is more than use of technology.

- Information Literacy is concerned with empowering people regardless of modes of information access and delivery.

- Achievement of Information Literacy goals requires flexible strategies to meet the needs of diverse communities and individuals.

- Information Literacy is a prerequisite for participating effectively in the Information Society and is part of the basic human right of lifelong learning.

1.2 Welcome Remarks

The colloquium convened with opening remarks by Dr. Breivik on behalf of the National Forum on Information Literacy, and Mr. Abdelaziz Abid, UNESCO senior programme specialist of the Information Society Division. Following these opening remarks, the first sector theme presentation was convened.

2. Learning & Education and Information Literacy
2.1 Lead Sector Experts Presentation by Dr. Barbara Cambridge & Dr. Penny Moore

Dr. Barbara Cambridge began by reiterating the IFLA statement that lifelong learning "starts with the important foundation of basic literacy/oralcy and begins a continuum of literacies which are so instrumental for lifelong learning, social inclusion, and personal and community development in modern societies." She said the current key priorities in support lifelong learning are advocacy and awareness raising and fostering of cooperation, collaborations and partnerships. She noted the importance of developing Information Literacy as part of lifelong literacy, stating that developing habits of inquiry in everyday life and in informal education supports Information Literacy. Formal education must embed Information Literacy instruction and practice into all subject areas at all educational levels, as it is learned.

Then Cambridge and Dr. Penny Moore offered six key and supporting propositions regarding Learning & Education and Information Literacy, which reflect conditions that underpin the relationship between Information Literacy and student learning outcomes that should flow on to lifelong learning and community participation. The propositions support the centrality of lifelong literacy, acknowledging habits of inquiry developed in informal education, the workplace, and elsewhere but highlighting Information Literacy practiced in formal education.

Proposition 1:
Teacher and faculty/staff preparation, continuing professional development and scholarship are key to improving learning outcomes through Information Literacy.

Cambridge stated Proposition 1 has three components, which are key to improving learning outcomes through Information Literacy: preparation, continuing professional development, and scholarship. In the context of teacher preparation, she talked about the outcomes of the October 2005 workshop held in Sri Lanka, which created the "Empowering 8" elements that are part of the process of getting information literate.
Cambridge discussed the elements of the "Empowering 8", stressing that the Colloquium's point is about individual persons. She said the assessment of success in terms of the social component in Information Literacy and the constructivist approach are important in terms of personal needs and process.

The Empowering 8:
1. Identify a personal need for information to solve a problem;
2. Explore the problem, and develop a search strategy by posing important questions that need attention;
3. Select the sources from which information can be obtained: print, electronic, or human;
4. Organize, sort, analyze, and evaluate the information to apply it to the specific problem;
5. Create by synthesis one's own answer based on the facts available, and be prepared to justify the decision

6. Present the new knowledge, understanding, or resolution using a medium that is practical for the audience
7. Assess the success of the activity in terms of content investigated, the skills learned, and the product's applicability through personal, teacher, and peer feedback and evaluations.
8. Apply the changes in knowledge, skills, attitudes, and behaviour to new problems on a regular basis.

She reiterated that "Empowering 8" is not the only model, but it is an inquiry model that people can use for discussion.

Cambridge addressed the second part of Proposition 1 - the need for continuous professional development. Fostering the habit of inquiry, as well as the existence of new information systems, new technology, and new conditions in everyone's cultures argue for continuous professional development. Teachers must acknowledge new students in different contexts, to help them become information literate. For example, in South Africa, after apartheid, many students were entering tertiary education without the preparation that prior students had. Therefore, faculty and staff had to take advantage of professional development to help them understand the new students. An American example is the trend of students taking advantage of distance learning, which should raise questions about the differences in Information Literacy programmes. If students never see their instructor, how do they learn to find, use, judge information? All of these factors demonstrate that change is continuously going on, and argues for continuous professional development for all educators.

As an example of the third part of proposition one, scholarship, Cambridge shared that a meeting of the International Society for Teaching and Learning, comprised of 650 educators, from 24 countries, consisting of faculty members, and others who are studying how students learn, met in Canada, October 2005. She gave an example of historians asking the question "how do students coming into a history class learn to think and behave like a historian?" Doing so involves asking the questions that historians ask, going to the resources that historians typically use, judging those resources in the way that historians' do, and sharing that information in the ways and genres, that historians typically use. Cambridge believes there is a ripe opportunity for those who care about Information Literacy to begin defining it within disciplines in conjunction with scholars who are doing the scholarship, so that it is embedded and spread across disciplines.

Proposition 2:
Decisions concerning educational policies, pedagogies and practices should be based upon research evidence examining the relationship between Information Literacy, educational achievement and specific learning outcomes.

Beginning her discussion of proposition 2, Moore credited Dr. Phil Candy's Prague paper, where he pointed out that the responsibility for development of Information Literacy capability must be shared by a range of agencies and organisations. The education sector itself is diverse: early childhood and primary schools, secondary and

tertiary colleges, technical and vocational, and of course community institutions, not to mention the government departments and private funding agencies that support them.

Although the contexts of learning and resources vary markedly, these organisations and agencies are supposedly unified in a focus on student achievement. Moore quoted Ken Haycock that "Student achievement is the bottom line." It is this concern that logically should inform educational decision making regarding classroom practices, guiding pedagogy, supporting policy development and the levels of resources to meet the needs of students with diverse needs. However, another critical question was posed by Candy at the Prague meeting: What do we know about Information Literacy that influences how we should teach? This exposes a weakness in Information Literacy development. While curriculum teams may focus on what we should teach, there is a general perception that there is a dearth of 'good research' to inform about Information Literacy inform decision making in education. Moore insisted that we have to ask why.

She discussed a longitudinal study covering the period 1996-2003, by Ann Clyde, for the K-12 education sector, where questions were raised that need to be addressed if the professions of school librarianship is to be able to rely on research evidence as a basis for decision-making. Moore noted, too, that those who were more active in looking at Information Literacy and learning outcomes are now studying policy and leadership issues. That the greater proportion of research evidence comes from single studies that have no follow up means that we get snapshots of the current situation, not change in learning outcomes as a result of sustained attention to Information Literacy. This is insufficient to convince education decision makers of the significance of the concept.

Moore next presented some of the evidence concerning Information Literacy achievement and learning outcomes. She said an instructional design approach to Information Literacy development is needed to ensure that explicit teaching occurs; that educators should adopt or develop Information Literacy standards to inform monitoring and assessment of learning outcomes, and coherent programmes of research are required to reveal long term effects of Information Literacy-based teaching on student learning, effective teaching and curriculum development.

She suggested that what we know about Information Literacy should influence how we teach. The limited literature is biased towards studies from around the world that identify deficits in information skills related to learning tasks using libraries, specific print resources and information Communication Technology (ICT), as well as the Internet.

Moore stated that the conclusion drawn from such studies is that Information Literacy cannot be left to chance--it needs explicit development. The message from studies involving the use of models of inquiry that are central to Information Literacy is that explicitly drawing students' attention to their thinking process, while handling information, is an excellent vehicle for promoting meta-cognition and Information Literacy simultaneously. There are models such as "Big Six Skills", the Canadian "Focus on Inquiry" model, and many more, which make the cyclical and iterative nature of

inquiry easier to handle initially. In their turn, studies of meta-cognitive development demonstrate long lasting positive effects on students learning outcomes.

She reminded the audience, that at the Prague meeting, Ms. Caroline Stern flagged a need to take an instructional design approach to Information Literacy development. Moore followed with some examples: Australian studies found that where teachers and teacher-librarians have explicitly planned and taught for Information Literacy, factors such as self-esteem, self-perception, control of learning, mastery of content, task focus, and reduction of confusion and frustration are influenced positively.[1]

She shared information about another study by Moore and Page, where five year olds gained a sense of purpose for learning to read when their teacher modelled inquiry procedures in the context of shared reading. Teachers estimated that the class was outperforming the class two years ahead of them on these skills.

In that same study, which involved thirteen teachers across elementary and secondary school, taking an instructional design approach to Information Literacy was seen to have profound effects on teachers themselves. Moore provided the example of one cynic completed an evaluation form saying, "I came for the coffee, but you've changed the way I teach. This junior teacher then influenced the whole science department in her school to adopt an Information Literacy approach to instructional design because she saw the impact on student achievement in her own class.

Moore addressed the relationships between evidence, policy and practice by noting that practice, dissociated from research on the practice, offers anecdotal rather than systematic evidence. Information literacy outcomes-linked evidence should be presented in ways that meet the information and problem solving needs of policy makers and practitioners. Two issues are underlying the relationship between evidence, policy and practice. One concerns engaging educators as researchers, the other focuses on the information needs of policy makers at all levels of education. In both cases Information Literacy development is both the problem and a potential solution. The implication is that calls for more robust evidence of Information Literacy's impact on learning and teaching and practitioner research should be accompanied by Information Literacy development in service of the educators' own learning needs and that comes back to teacher preparation.

Moore noted other issues at the policy level. For example, where Information Literacy is still invisible, decision makers won't seek outcomes linked evidence. The new Clearinghouse on Information Literacy and lifelong learning being established in Slovenia should assist in making pertinent literature more easily identifiable and accessible, but what can be done to ensure it is sought?

Moore flagged The UNESCO/IFLA meeting in Bangkok, as one of many that have called for campaigns to raise awareness of Information Literacy across the education sector but reminded the audience, as Mirja Ryynanen implied in Prague, that messages

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[1] Todd, 1995.

about benefits of Information Literacy must be framed in the language of the people who need to be influenced. Sometimes, as Bangkok participants noted, that means identifying local people who need to become advocates to work with practitioners and develop leaders - speaking their language and addressing their needs. Sometimes it means talking to educators, economists and librarians so awareness-raising needs something more than marketing.

Moore recommended that the advocacy workbook approach used by Pat Cavill and Ken Haycock, *Information Power* could be applied, and messages concerning the diffusion of innovation could assist in strategic planning. At the Bangkok meeting, James Henri put forward a proposal for a workshop on Policy Writing and Implementation using Information Literacy as the working content, to be held as a pre-conference workshop at the IFLA Conference in Seoul, Korea in August 2006. A series of such workshops would give practical support to complement awareness-raising. An Information Literacy outcomes-linked Best Evidence literature synthesis may assist. With highly transparent criteria for inclusion/exclusion, such a document would provide research leadership and standards as well as providing governments with a tool for decision making. Moore admits to bias, as she has just begun a project in which the relationship between policy, practice and use of best evidence are being explored and she sees this as having some potential in uncovering more effective ways of communicating evidence to decision makers.

Proposition 3:
Particular pedagogical practices both support, and are well supported by, the practice of Information Literacy.

As concerns proposition 3 the Sector Lead Experts shifted back to pedagogy, and Cambridge highlighted three pedagogical practices: oral story telling and debate, service learning and self-assessment. Cambridge was influenced by Ms. Kay Raseroka's comments at Prague about the importance of oralcy as part of Information Literacy, and by Ms. Helena Assamoah-Hassan, Sub-Saharan Africa team member, who recently taught her about the importance of town criers in Ghana for spreading information in villages across the country.

Cambridge sees oral story telling as a way of creating a habit of inquiry that serves as a basis for Information Literacy. It is a very effective pedagogy for beginning those habits. Becoming aware of origin, choice, use and generation of ideas is just as able to be developed with oral work as with print work or other kinds.

 She then discussed service learning, which requires attention to information sources includes application of information, generates new knowledge and uses assessment strategies. Service learning allows students to benefit someone other than themselves. It provides a sense of empowerment and teaches use of information towards an end. It is important to have the Information Literacy skills of retrieval and evaluation, but it is also important to consider the part of Information Literacy that concerns the use of information. For example, some of Cambridge's students redid a statement, given by a homeless shelter to new arrivals, about protocols and rules in the shelter. Cambridge

noted that the people affected are the ones who need to decide whether it is successful or not. In this case, it was the homeless who try to use the instructions. Therefore, a new assessment of the impact of information provided can happen in services, which also serves the dual purpose of serving the community.

Self-assessment is another area to be tied to Information Literacy. When lifelong learning is discussed, Cambridge noted that it is not always unpacked fully. For example, one part is the ability to know when you need to know something else; determining when to go back and get more information, or develop better criteria for judging what criteria will be needed in a particular area.

She offered two ways to of self-assessment, stressing that they are not the only ways. The first example is narratives, about how information contributed or did not contribute to success. She said the question must always be asked whether it is successful or not. The second example is of the growing use of portfolios. Cambridge said that many governments are reviewing the use of portfolios, for example, there is a project at Nottingham University, which is working, with the community, to develop personal development electronic portfolios that will start with early grades, through university, and continue into the community/work force.

Proposition 4:
Information literacy flourishes in educational environments where it is supported by: appropriate infrastructure, (ICT and organisational), knowledgeable leaderships, and a pedagogical culture centred on constructing knowledge using available technologies and information sources.

Moore introduced Proposition 4 by saying that the proposition and its fellows bring attention to the educational contexts in which Information Literacy must be developed. She offered the example that in OECD countries the literacy rate is close to 100% but elsewhere it is much lower (e.g. 55% in Southern Asia). In these countries education is not a given right and information is not freely available, hence the need for UNESCO's Programmes "Education" and "Information for All". To develop Information Literacy against this backdrop requires recognition that what works in one education system may not work in another and that Information Literacy may be promoted in a variety of ways. Further, the concept of Information Literacy needs to be presented in a manner that does not exclude the aspirations of any group of people so that its significance is evident to all people.

She reviewed some of the other infra-structure issues noting that ICT (Information and Communication Technology) networks complement but do not replace the need for quality education systems that promote Information Literacy. Where schools and/or ICT networks do not exist or are poorly resourced, existing community networks should be used to promote the development of Information Literacy. Administrative and organisational factors in education institutions influence "ways of working" that in turn effect integration of Information Literacy in teaching and learning.

She told the participants that His Excellency Mr. Adama Samassékou, the President on the WSIS preparatory committee and a former education minister in Africa, commented

that "The installation of computer or telecommunications equipment can be carried out speedily at affordable unit costs, whereas putting in place a quality education system at the secondary and higher levels calls for many years of highly consistent effort, particularly where the poorest countries are concerned."[2]

In Malaysia, Korea and Vietnam amongst others there has been a huge emphasis on ICT networks in recent years and much progress has been made. However, participants in the UNESCO Asia Pacific Education Innovation Development workshop are now becoming aware that Information Literacy means more than using computers. Moore said that neither ICT nor libraries are the answer.

She mentioned a personal communication from Dr. Diljit Singh of Malaysia, who participated in the Patiala, India UNESCO workshop on Information Literacy, in which he commented, "that technology is not necessarily a part of the INFORMATION LITERACY equation. The folks in rural Punjab get most of the information they want, but the only technology they use is the cell phone; otherwise it is all through oral interpersonal communication. Internet and electronic information resources are not part of the game."

As Cambridge had noted, all teachers should be teachers of Information Literacy. Some of the research, however, suggests that those in primary or elementary schools are more aware and perhaps more able to integrate Information Literacy across the curriculum. These teachers often work in teams and teach one class the whole curriculum. Whereas in high schools and the tertiary sector curriculum subjects are in effect in silos; and, for example, French and Chemistry teachers do not work together.

Moore commented on the similar effect in universities, too. University librarians have been at the forefront of developing or adopting Information Literacy standards but they may have little input to instructional design, other than for programmes they offer students for little or no academic credit and similarly may have no input to professional development of lecturers. The ways of working constitute a powerful influence on what can be achieved.

The next topic was knowledgeable leadership and pedagogical culture. Moore stated that potential advocates of Information Literacy need to be identified and trained in leadership and collaborative skills that underpin establishment of Information Literacy initiatives. Additionally, Information literacy leaders should have both support and senior status within educational organisations, and Information Literacy practice should be embedded in school information policies.

Moore mentioned that Barbie Keiser during the Prague meeting talked about the need for an information culture as the basis for an information literate society. She said that Ross Todd, writing in 1996, suggested that the way we view information, and the way we view people in an information-intense environment, shape the way we think about

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[2] IFLA Journal 30(1) 2004)

teaching and learning. She pointed out that James Henri and Sandra Lee extend this by saying that:

> Schools that perceive information as an object are likely to focus on information infrastructure such as libraries and computer labs. Such a view often articulates the ratio of information to students – one computer per student, one book per student – and will likely assess learning through quantitative measures such as tests and examinations while schools that focus on information as a process are likely to focus on evidence that students are becoming informed and equate an information literate teacher as one who has mastered the processes of becoming informed.[3]

Finally, she said that Caroline Stern, again in Prague, had talked about "Information Literacy champions"; people who know the strengths and weaknesses of students and colleagues and who use an instructional design approach in which Information Literacy is developed in a context that matters to the lives of students.

These perspectives bring leadership and pedagogical culture together, contributing to the notion of information leaders as agents of educational change, a topic which was the focus of the conference of the International Association of School Librarianship this year. The conference proceedings are a rich source of discussion material for us.[4]

Proposition 5:
The rapidity of technological chance requires continuous updating of the definition of Information Literacy and our assumptions about information technology.

Cambridge introduced Proposition 5 by stating that the IFLA document makes a distinction, one that the Colloquium takes as a given, that Information Literacy is not the same thing at ICT.   Information Literacy is the "ability to use knowledge and information interactively." ICT is the ability to use technology interactively. But the two are often interrelated and will be increasingly so in the future.   Cambridge recommended the book Radical Evolution, by Joel Garreau. He writes about the lessening distinction between humans and machines, and relates a number of developments in pilot stages. She also mentioned that the MIT robot lab has hired a theologian for the robots it's developing. As Garreau wrote, the object is to "produce machines that truly know what they are doing." If they know what they are doing, they can generate, judge and use information; they can be information literate.

Cambridge noted that the ubiquity of personal computers, handheld devices, and cell phones, opens new opportunities for practice in Information Literacy. She said that we need to learn from students about how they learn in naturally occurring Information Literacy practices, such as gaming. This can be carried over into other domains, i.e. patients in health care. She said that there is a lot of literature about digital natives and

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[3] James Henri and Sandra Lee (2005) Information Policy and Hong Kong Schools:
A review of the literature and preliminary benchmarking of practice 34th Annual Conference of the International Association of School Librarianship (IASL)
[4] IASL Conference proceedings are available at http://www.iasl-slo.org/conferences.html

digital immigrants, which needs to be studied. She asked that Sra. Soledad Ferreiro, Regional Team Leader for Latin America and the Caribbean, discuss blogging. She further stated there are a range of challenges. The digital divide must be eliminated, and at the same time there are the extraordinary changes in both human capacity and in machine capacity coming. She concluded by wondering how Information Literacy will be defined in five, ten or fifty years.

Proposition 6:
Implementation of national strategies in education, health, and government is dependent upon the ability of all people to gain intellectual access to information. Accreditation criteria for education programmes at all levels should therefore include attention to development of Information Literacy.

Due to time constraints, discussion of Proposition 6 was abbreviated. Moore said that Information Literacy is more likely to become embedded at all education levels if it is associated with other requirements and movements. If we take the advocacy position, we have to demonstrate how Information Literacy development impacts not only on learning outcomes, but also on what it enables people to do beyond the education sector and correlating those achievements with the goals of government and commerce could create powerful supportive alliances.

She raised one of the principles of the World Summit on the Information Society, which is to ensure that "everyone can create, access, utilise and share information and knowledge, enabling individuals, communities and people to achieve their full potential in promoting their sustainable development and improve their quality of life."

This principle is in accord with the oft repeated goal of Information Literacy education and at this meeting we have a cross sector group that could begin to make the connections between Information Literacy education and "potential in promoting sustainable development and improving the quality of life."

However, Moore said, Information Literacy is currently very patchily addressed in education. For example, Information Literacy standards are being adopted or developed, particularly in higher education, but adoption does not necessarily mean that the adopters can influence teaching or programme development.

Moore concluded by stating that it seems that there will continue to be difficulty in attracting the funding and resources required to address the WSIS principle until Information Literacy moves into the assessment and evaluation field. Similarly, until accreditation and qualifications authorities begin to seek evidence that information policies and practises underpin administration and curriculum practices in education programmes, progress towards the Information Society will remain uneven.

2.2 Regional Perspectives

Breivik asked the Regional Team Leaders to talk about what is occurring in their own regions, to see where there are commonalities among the regions, to be followed by open discussions to begin problem-solving.

Ms. Christina Tovote, the Regional Team Leader for Europe, began by mentioning the Bologna Process which will establish a European area of higher education by 2010 and has a goal of making the European higher education systems "converge towards a more transparent system," and provide a "common framework for the different national systems, based on three cycles - Degree/Bachelor, Master and Doctorate."[5] The Bologna documents also stress lifelong learning, mobility, employability, etc. One goal is to strengthen the social dimension and reduce the social inequity that exists in higher education.   Additional goals are to stimulate student's personal development and prepare them for the job market and to be active citizens in a democratic society. Tovote sees the Bologna Process as a great opportunity to raise awareness of Information Literacy, as it discusses transferable skills and generic skills, which includes Information Literacy.

Dr. Forest Woody Horton, Jr., Colloquium Coordinator, asked if there was anything the participants could do in context of this meeting to help the coordination problem of the Bologna Process, and asked that all keep it in mind when making end of colloquium recommendations, as the recommendations are not just concentrating on content or pedagogical aspects, but also on the processes involved. Tovote agreed, and asked Professor Albert Boekhorst, from the European team, to comment. Boekhorst stated his belief that it is important to get Information Literacy in the accreditation of the different levels of the schools, and that it should be a firm recommendation that Information Literacy be integrated into the curriculum during accreditation of schools.

Professor Bojil Dobrev, member of the European team, summarized the situation of Europe, noting that there are different levels of achievement. He said much effort has been expended to establish the prerequisites of Information Literacy, particularly computer and internet literacy. According to the aims set by the European Commission by the end of 2005, almost all schools in the old EU member states will have computer equipment and internet connections, with a ratio of 1 computer per 10 students. The new member states, for example Bulgaria, are putting a lot of effort into following the Bologna Process. At the moment, in Bulgaria, 50% of the schools are now equipped with computers.   In the next two years, Bulgaria hopes to achieve the target set by the European Commission. He sees these prerequisites to achieve Information Literacy as more or less achieved in Europe. He supports the recommendation by Boekhorst, to put Information Literacy as a subject in schools, but also in universities, in particular in business schools-– as that is the place where the future managers and businessmen learn what information they need.

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[5] http://www.eu.int/comm/education/policies/educ/bologna/bologna_en.html

Ms. Martha Gould, Governance and Citizenship Lead Sector Expert, requested that when the meeting participants talk about putting Information Literacy into the curriculum, they must also address it in the universities in terms of teacher training. She stated that they must also go one step farther. For example, if the Europeans want standardization throughout the European region, they need to think in terms of bringing their governing entities together to set it into law, as public policy.

According to Ms. Julie Sabaratnam, the Regional Team Leader for Asia and Oceania, her team did a SWOT analysis for the region. They tried to generalize the key areas of concern, given the disparity of the region. She stated that in Asia the fact that education is important is universally recognised. Governments play a critical role in providing the basic education. In recent years, to varying degrees, each country's Ministries of Education have placed emphasis on Information Literacy programmes, including ICT literacy, in terms of using computers and tools, as well as being aware of information and the value of information. The most interesting development was with SARS and the tsunami of December 2004, which led to many volunteers coming into the region, and regional libraries, who are mainly led by non-governmental organizations (NGOs), civic and religious groups. Sabaratnam emphasized that volunteers are something the Asian region can tap into, and she was confident the NGOs will help in terms of funding. She further stated that Information Literacy exists, but the means need to be addressed. A lot of groups want to help, for example, in raising oral literacy or teaching English in some countries, others emphasize reading or IT skills. Sabaratnam summarized that Asia needs help in terms of content, the space, and the infrastructure and funding assistance.

The North American Regional Team Leader, Dr. Bob Wedgeworth, began by saying that the North American Regional Team is still being composed, and noted several needs likely to be at top of its agenda. First is the effect on immigration throughout the North American region, especially in terms of the kinds of skills that immigrants are bringing to their new homes. Second, he said the United States has come to understand that ICT is not the complete answer and that something needs to be done to reform education, which is a controversial topic. He also noted that Canada has a much more holistic approach to an articulate education system than the US, and asked Dr. Jesus Lau to comment on the situation in Mexico.

Wedgeworth said there are immense pockets of poverty in the region that must be addressed. The generally high literacy rates in OCED countries mask what is apparent in the entire developing world, i.e., there are large pockets of people with very low literacy skills, such as the indigenous populations in North America, Latin America and the Caribbean. He sees immigrants to Western Europe as another example, and asked how to bring them into full participation in the societies in which they live.

Dr. Jesus Lau, member of both Latin America and the Caribbean and North America teams, generally agreed with Wedgeworth's comments. He added that there are two challenges for the educational sector which are based on economic and social development, pointing out the dichotomy between those going to school from

kindergarten through university levels and those who are not, as well as the dichotomy between those who have the means to access information, and those who do not.

Ms. Kay Raseroka, Regional Team Leader for Sub-Saharan Africa, said her team recognises the need to involve people who come from a subject sector base, rather than just librarians and educators, to learn their perceptions about Information Literacy. The team further agreed that the most important issue to be addressed is that of oralcy, as the majority of the 800,000,000 global illiterates are located in the Sub-Saharan Africa region. She also noted that the definition of Information Literacy immediately poses a problem because of the political links that come with literacy.

Raseroka pointed out how in the Sub-Saharan region people have been able to learn how to learn without having formal school-linked literacy. Therefore, she insisted, the definition of Information Literacy must include the issue of competency of life skills, adding that it is imperative to be inclusive, rather than exclusive, of illiterates because people who don't read print still contribute as informed people. Raseroka expressed her appreciation of the Lead Sector Experts, who put the issue of oralcy in the middle of the debate during their presentation, saying that such support gives her team leverage and a place to start.

Her team's initial findings are that the Sub-Saharan ministers are involved in providing education for all, and are grappling with the increasing numbers of school going children to meet the Millennium Development goals. She reiterated what Abid said, about opening school doors and increased attendance, but added that the reality is that the quality of the education is not impressive and there are lots of dropouts as parents realize that school is a waste of time for their children. There is negative feedback, which will affect what the team is trying to do, unless parents and oralcy are integrated.

The Sub-Saharan Africa team is specifically looking for research studies and research methods to address how people become informed and competent when they are not educated in the Western system. Additionally, HIV-AIDS is very important in terms of educating both male and female children. Raseroka said that the Sub-Saharan Africa team noted that when girl child and woman education is discussed, as UNESCO and other organisations recommend, they get a negative reaction from men, who either feel excluded or simply decide to drop out of the social responsibility component. The Sub-Saharan Africa team would like to see a parent or elder approach, which would be inclusive of males.

Ms. Helena Assamoah-Hassan, member of the Sub-Saharan Africa team, added that the team wants to see reform in the process of teacher education because things included at that level are passed on to the students. For example, if Information Literacy is integrated in the curricula of teachers' education programmes, by extension, it should improve student outcomes.

Professor Iman El-Kaffass, the Regional Team Leader for the Middle East and North Africa (MENA), introduced Dr. Hassan Yousef, from the Bibliotheca Alexandrina and Dr. Ashraf Said, from Ain Shams University, Egypt. She said she would be presenting the work of many people, who work on Information Literacy in the MENA region. She

agreed with Ms. Raseroka about the importance of eradicating illiteracy. El-Kaffass noted the high percentages in the area, especially among women.

She said the second issue is access of education (i.e., access for all) and the availability of information, schools, infrastructure, technology, financial means, etc. First, El-Kaffass said, MENA needs to increase access. Second, it needs to reduce of number of dropouts. The third issue questions the quality of formal education. The fourth issue concerns moving and integrating into the knowledge society. The Arab and North African countries have announced their efforts to move into a knowledge-based society, but it is unclear how far they are into the process.

A fifth issue is the availability of Information Literacy in the different MENA societies, which El-Kaffass would like to establish as a priority in the region. Because of the different economic and political situations, Information Literacy is not the top priority of the governments or of the people themselves. Related issues are providing the infrastructure, and linking Information Literacy to employability. She mentioned Egypt specifically as an example of a good attempt, because the Ministry of Information and Communication was promoted to Prime Minister. She hoped this was an example of the country's focus on Information Literacy, which is also pushed forward by having a Prime Minister with a background in Information and Communication.

Breivik asked all the Regional Team Leaders to give one example of a best practice.

Sra. Soledad Ferreiro, the Regional Team Leader for Latin America and the Caribbean, introduced her team members that were present, Professor Gloria Ponjuan, from Cuba, and Professor Elisabeth Dudziak, from Brazil, and noted a report from Peru. She stated that there is blindness in Latin America in terms of discussing Information Literacy. Ferreiro agreed with El-Kaffass's point that Information Literacy is not a governmental priority, but noted that South American universities are making it a priority. For example, Chilean universities have Information Literacy as a programme. She agreed with the Lead Sector Experts about the challenges to deal with young people. In terms of needs, she suggested big workshops for trainers.

Ferreiro noted that in Latin America, everyone agrees on using the term Digital Literacy; and the concept is covered by many institutions, for example, grassroots institutions working with very poor people. Ferreiro wondered how to move from Digital Literacy to Information Literacy, especially as many terms existed for Information Literacy, such as "competencies" or "skills." Because of the lack of uniformity, her team can't put through strongly what it wants to do.

Wedgeworth noted the need to recognise the time scale for what is being discussed, as well as the problem of developing policy. For example, in the US, the policy approaches are to require great accountability for funds invested in reforming education, but also wanting accountability to show outcomes almost immediately. He wants to recognise that we're not talking about a 3-5 year time frame to see changes in outcomes, but rather decades.

Breivik added a model for North America, which is fairly unique in that all institutions must be accredited by other educators if they want federal funds. In recent years, agencies have required that Information Literacy be a basic core skill that all undergraduates learn. This requirement pressures academic institutions to pay attention to Information Literacy. This could be a model for other countries, where there are accountability models in place.

Raseroka reiterated the differences in contexts. She gave an example of a working model in Sub-Saharan Africa. While this is not necessarily a best practices model, it is one that exists right now due to need. There are SOS villages where HIV-AIDS orphans live. Elders come in to teach the children about their culture. There are ways of teaching the elders, teachers and the children to become information literate about the HIV-AIDS issue. It is a difficult model, because everyone recognises the urgency, and yet the dynamics have not been worked out thoroughly--except in the case of improving the children's understanding of who they are and fostering the feeling of belonging to someone whose own parents have died.

El-Kaffass said that Egypt has a vivid model in the American University in Cairo's (AUC) Leaders in Education and Development (LEAD) programme, which offers full scholarships to one male and one female from each of the 27 governorates in Egypt to study at AUC. Parallel to their regular course of studies, they enrol in a leadership development programme, of which Information Literacy is a basic component. The LEAD programme uses different mechanisms which the Lead Sector Experts mentioned, such as constructivist thinking and service learning. The LEAD Programme encourages the rest of the society in Egypt, and the rest of the Egyptian educational institutions to embark on similar models, because it has proven to be successful.

El-Kaffass also offered two other Egyptian models. One is a programme called Child Library in Egypt, where a library is placed in every park, with low cost materials, and accessible to everyone. Another project's goal is a computer for every school child. Different organisations run the project, and private sector and NGOs help get the computers. El-Kaffass also pointed out that the cultural centres, like the Bibliotheca Alexandrina, have also made a shift in the culture of Alexandria.

Ferreiro presented a model of the Library of Congress of Chile, which combines the SCONUL (Society of College, National and University Libraries) model with an integrated marketing model.[6] She said the librarians have a variety of techniques of observing, talking, and making ethnographies of what they hear, listen to, and observe. Ferreiro mentioned that Chile has 1700 access points, where in an informal setting, four-hour workshops, using the SCONUL model, are offered. She is currently exploring a model of word-of-mouth marketing that makes use of people's talking about their experiences.

She gave the floor to Dudziak, who said the process of transformation of reality is possible through social inclusion, for Digital Literacy is only a part of Information

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[6] See http://www.sconul.ac.uk/activities/inf_lit/sp/model.html for more information.

Literacy. Globalization has a perverse effect upon communities and citizens and local identities need to be preserved, as the only way to guarantee social inclusion. At this point, she said, it is necessary to admit that technology, information, and knowledge are not enough. Values and attitudes toward responsibility, commitment, ethics, transparency, popular participation in order to surpass the differences and influence the access of information, are also needed. Information Literacy is more than a sum of attributes, it is a process that facilitates social inclusion, through pedagogical mobilization of interrelated content including knowledge, skills, attitudes and values of citizens.

 She continued that Information Literacy must be based on Paulo Freire's methodology and mediated pedagogical process. Information Literacy must be developed in conjunction with research activities integrated into the curricula and developed through engagement in resource-based learning. She concluded by saying that a movement must be started around Information Literacy and Information Literacy competencies as instruments of social inclusion.

Tovote stated that in Europe, Finland can stand as a model for the rest of the countries, for it has really succeeded in reaching the political level. Finland has Information Literacy programmes for all ages--from small children until university. Additionally, Finnish children are among the best readers in the world, which might be a related factor.

Sabaratnam wished to share an example from Singapore, which is more developed than the rest of Asia. She said they started looking at the programmes from the 1990's. Typical of how the government works, Singapore usually has national blueprints, which include an *ICT in Education* initiative. She clarified that ICT does not simply mean technology, but includes information, communication and technology, looked at holistically. In the blueprint, pilot tests are implemented before full deployment across the nation. In the case of *ICT in Education*, it was championed by an IT agency, a government agency called the National Computer Board (NCB), which is now called the Infocom Development Authority, after merging with the telecom authority. Although the champion is an IT agency, interested in the use of technology, it works with the Ministry of Education, which is considered a "user champion." Together, the champion and user champion developed a plan to raise the Information Literacy of the community, from students in kindergarten up to university. One of the first projects was a teacher-student workbench. It evolved to where programmes, in parallel, had to raise students' Information Literacy as well as develop teaching new methods of inquiry. Teachers received training for the new mode of training. Specific targets were set to insure access to content, tools, and computers, and accreditation was required. Libraries were included to insure available content. There was also a digital library project, which catalogued the different libraries' collections, as well as databases, whose licenses were purchased by the government. The Libraries worked with the NCB to teach people how to exploit it. This led to schools introducing new curricula or learning methods, moving towards project based learning. The project has been successful, and the younger generation has become ICT savvy.

2.3 Open Discussion

Abid wished to return to Wedgeworth's comments about the need for educational reform. The success or failure for meeting the realistic international target in education for all, by the year 2015, to cut by 50% the number of illiterates worldwide, and by 50% the number of children who don't go to school. Reaching this target will depend very much on the actions of governments to improve both the quantity and quality of the teaching force. The shortage of teachers is reaching unprecedented levels. This can be explained by an increasingly challenging and poorly paid profession. We are putting a lot of stress on the teaching force. Teachers are required to have a number of competencies and enthusiasm, which should not be expected from underpaid, unrecognised people. Mr. Abid highlighted, for the meeting, that Information Literacy must be seen as one of the foundation stones of quality education, and that without qualified, competent, motivated and performing teachers, quality education for all will not be achieved.

Dr. Hoda Rezkanna, member of the MENA team, fully agreed with Abid and stated that the process of learning is very much dependent on the proper teachers and administrators of the schools. She also mentioned the need for continuous professional development for teachers. She said we must work to attract young generations to the library and to implement a comprehensive, integrated process which includes all the stakeholders. She stressed the quality of the children's treatment, as more than 55% of Egyptian society is young, with the MENA region having a similar percentage. She reminded everyone that the MENA society's way of spreading information is oral. Speaking as a parliamentarian herself, she commented that it is extremely important to develop proper policies and legislation.

Dr. Annissa Hassouna, member of the MENA team, shifted to the problem of conception. She thinks there is a problem in communicating the concept to ordinary people. It seems vague, and when translated in Arabic, it seems related to an elite domain, to the privileged people. It's not linked to the daily life of ordinary people, so they don't see the importance to themselves. She raised the problem of the resources, saying that privileged schools can offer such services, and their graduates have better chances of employment, but government schools and other schools can't because they don't have the resources or funding, which prevents social inclusion. So she worries about the social side effect, which is happening in Egypt, and she would like to hear about what happens in other regions.

Breivik said that the Information Literacy movement from the beginning has focused on the have-nots. Unless today's society can move some of the have-nots to become have's, the world gets worse for everyone.

Dr. Marian Koren, European team member and IFLA representative, said that the real issues for children are not being addressed. She pointed out that people need teaching/training concerning the meaning of Information Literacy. She thinks a variety of persons can help raise understanding that there are many sources of information. She thinks critical thinking and life skills should be interlinked.

Dudziak spoke about Professor Regina Belluzzo from Sao Paulo, who has been working with a broad spectrum of people (e.g., workers, entrepreneurs, librarians, and professors) to address Information Literacy practice. To accomplish this, Belluzzo has explored practical tools as mental maps, semantic trees, brainstorming and group dynamics. Professor Marcia Rosetto, President of Brazilian Federation of Library Associations (FEBAB), in collaboration with Belluzzo, has done pioneering work in the Sao Paulo State Secretary of Culture. Dudziak described the project "*Sao Paulo: A state of Readers,*" which has the objective to raise the awareness of hundreds municipal representatives concerning key abilities to be developed. The project offers both theoretical and practical orientations though integrated work between library and school.

Horton underscored a transcending point that has not has come out as clearly as he'd like. In the National Academy of Sciences Report, that came out three years ago concerning 21st century learning, is the line: "Whereas learning, and communication are both processes implicitly involve the transfer or sharing of data information, knowledge and sometimes wisdom, from a source to a receiver, increasingly because of the technologies in the 21st century, young people are coming to regard how they assimilate information as an experiential thing, and not something that depends on the traditional modalities of reading books, of artifacts." He worries about the amount of gaming his grandchildren do and whether learning is taking place, but has realized that the thrill of experiencing is what is driving them and that learning is taking place. There is a tension between experiential and traditional modalities of reading books and maintaining artifacts as a way of learning, from one generation to another; and Information Literacy needs to take into account learning and communicating in the experiential modality rather than just the traditional modalities.

El-Kaffass reflected on Breivik's comment on teachers, and said that in any model developed for Information Literacy must consider the context of developing countries. She mentioned some essentials that developing countries would want to consider, such as Information Literacy and employability, adult learning and Information Literacy for women, and the specific culture of different societies. For example, in the Middle East, the culture is that knowledge is power. Therefore, sharing of information is an issue, because people do not want to share information for fear of losing power. She wonders how to talk about an information literate society when people are worried about releasing information. She raised the issues of poverty, illiteracy and overpopulation, saying that sometimes recommendations are easier to apply in countries that are not overpopulated, and very different decisions about funding are made. For example, doing teacher training in the Emirates (with 20-25,000 teachers) is very different than doing it in Egypt (with 1,000,000 school teachers).

Mr. Abdul Malike bin Maiden, member of the Asia and Oceania team, was interested in Gould's discussion of programmes for retired people with life skills. He asked for specifics, such as how do the programmes or the teaching methodologies get updated as they change. He said that as he comes from Singapore, which is outcome and output driven, he wants a core competency of Information Literacy, and to know how to

measure the quality of the teacher or librarian. He understands the different cultures will attend it differently.

Wedgeworth returned to Abid's points, and touched on Horton's point, noting that one of five people over the age of 16 in the world is illiterate, and many children are not in school. As he listened to the earlier discussion regarding the quality and quantity of education, he noted that no suggestions are adequate to the scale. To succeed, we must think differently. He talked about local schools, in different local communities, that are required to recruit and train teachers to address that classroom. He said that universities are the same; he spent the last ten years at one university, 30 miles from another university and there was no simple way for an expert in his university to teach students at the other university in their area of expertise, and vice versa. He suggests approaching the matter of scale by looking differently at inserting the concept of Information Literacy, other than training millions more teachers. He believes an equal level of ability among the teachers in the local community will never exist. The concept of master teachers is needed; who can be very influential in a much larger area, using the technology, similar to bloggers who seek expertise wherever it is.

He was pleased by the comments regarding adult education because the current mode of adult education is based on concepts which, as Dudziak points out, were developed by Paulo Friere in the context of social change. In that model, adults don't have the patience, especially illiterate adults, to learn for the sake of learning. They have to see that there is some action they can take as a result of the learning that will be meaningful to them. There has to be a need, usually not an individual need, but rather a family or a community one. He questioned the concept of the individual in formal schooling, because in adult education, that is not usually the case. The need for education must be in the context of some cultural expression, which is related in part of what was being said earlier by Raseroka and others. The cultural expression does not have to be in a textual form, but can be in musical form, or dance. It has meaning for the people who are trying to learn. They contextualize the problem, using critical thinking that relates what they know to solve the problem at hand, so it leads to some action. Finally, Wedgeworth commented that the education goes beyond teachers. There are many competent people, who are not formal teachers, who can participate in the teaching process. There are thousands of them in the programmes he manages around the world, as tutors, mentors for others who are trying to learn. They must be incorporated into the educational process, if not into the formal institutions.

Dr. Phil Candy, Health & Human Services Lead Sector Expert, pointed out five dialectal tensions, which on the surface seem irreconcilable, and five resolutions as a way of thinking constructively:

- There's a built-in tension between wanting input or validation from somewhere else, but on the other hand, wanting to invent or appropriate or co-opt or adopt something that fits into local circumstance.
- Information Literacy is often critical of existing orthodoxy so a tension exists between respect for wisdom of the elders and acknowledgement that it's the elders that got us into this muddle in the first case.

- There is tension between formal education and recognizing that most people are not in formal education.
- Tension between focusing efforts on young people or those already in power. Dr. Candy stressed this was not an "either/or "situation, but rather an "and."
- Tension is between oral and experiential values and things that already written down. He reiterated that this is also an "and" situation.

He wondered how these things are reconciled from thesis to antithesis to synthesis. The five tentative solutions are:

- Recognizing and honouring good practice wherever it is. If in people, then the repository is a person. Make it available wherever it exists.
- Using existing networks, structures and strategies. "Built in, not bolted on."
- Framing visions of the future, imperatives and incentives that are compelling to decision makers.
- Selecting key categories of people to concentrate on one. He thought young mothers and teachers were excellent suggestions.
- A simultaneous approach to young and old people is needed. They already are together in existing structures, such as churches and faith communities, or community groups, cultural circles (Friere's term). He offered the example of the Literacy Miracle in Guatemala, which has a tag line of "Each one, teach one."

Candy is excited about what the participants are doing here. He asked whether they were being subversive enough, to use another Frierean concept. He said that the goal is to change the world, and there are deeply embedded oppositional structures that make this difficult. In a sense, Information Literacy is another attempt to change the balance of power. Regarding the last point, we should learn from mass education movements, whether about environment, health, smoking or appropriate sexual practices. We need to examine what has been highly successful world-wide and determine the essence of those successful interventions that we can use to promote Information Literacy as well.

Boekhorst asked for attention to be paid to the educational concept because teaching and learning are being used alternately as if they are the same. He emphasized that they are not. There is a clearly a shift from "teaching to" to "learning from."

Hassouna said that as a banker, she needs to return to resources and funding. Sometimes in a developing country, for example in Egypt where she has first hand experience, there are funding priorities. One cannot depend on the good judgment of the people making the decisions. Many of the developing countries refuse the loans from international donors attached to education because it is not profit-yielding, preferring other industrial projects. She suggested that international donors make loans conditional upon a percentage going to education. Second, as an example of best practices, as in other areas, she recommended having a Map of Hope that spotlights those who have achieved success in places, to encourage people and give credit to those who have succeeded. She suggested in a follow up progress report to make a 'blacklist' of the countries that don't abide by the resolutions, as was done in 2000 by the United Nations Security Council Resolution 1325 (on Women Empowerment, Peace and

Security).[7] She stressed that domestic and international pressure must be applied to governments that don't think about future generations.

Abid addressed Hasssouna's idea about exerting pressure on various countries, saying they exist in some form, such as the United Nations Development Programme Development Report.[8]   He wondered whether a way could be found to have Information Literacy as one of the indicators.

Mr. Youssef Mohsen, from the MENA team, suggested looking at what the students in all levels of education are retaining from the information taught to them, noting a World Bank study that found the number of years for teaching basic skills was insufficient for students to retain those skills. He also shared two models from the Bibliotheca Alexandrina, one is *Hole in the Wall*, originally an Indian experiment, and the other called *My Book Mobile* where kids choose books in the computer, print them, and make them into a book and then read them. The activity is followed by a questionnaire to determine what they learned from this book.

Dr. Shawky Salem, MENA team member, tackled three points. He agreed with Hassouna about the difficulties with translating the term Information Literacy in Arabic. He explained that in Arabic the term "industry" is added to clarify the concept, which would otherwise too vague. He then raised the issue of quality of education, specifically addressing Egypt. He said that the various aspects of quality are addressed piecemeal, but never all at the same time. He hopes Information Literacy will improve the intellectual property issues in education as well, pointing out that many professors and teachers steal the intellectual works of others.

Sabaratnam built on what Abid said about teachers being the lowest paid, saying that a review of Singaporean libraries in 1992 to 1994 discovered that librarians were the lowest paid. The result, that both librarians and teachers are now better paid, made her realize that who leads the study makes a difference.   Singaporean librarians and teachers were fortunate to have influential champions who were plugged into the policymaking network, and able to effect change.   She also noted that when outside consultants assist in strategic planning the government is usually convinced, so she is unsure whether formal structure and system will be the best mode of achieving change. Alternatives include partnerships with NGOs. Additionally, the lack of succession planning must be addressed, so that the next generation of leaders has the contacts and know-how of the retiring leaders.

Breivik noted that teacher education and teacher continuing education seems to be one of the key issues, and should be focused to give more guidance when developing recommendations.

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[7] Accessible at:
http://daccessdds.un.org/doc/UNDOC/GEN/N00/720/18/PDF/N0072018.pdf?OpenElement

[8] Accessible at: http://hdr.undp.org/

Professor Gloria Ponjuan, Latin American and Caribbean team member, pointed out a problem of diversity of cultures on development levels and comprehension of the central team, stating that we are moving from "Information-for-All" to "Information Literacy-for-All." Ideas that take into account the reality of the world, of the regions, of the countries need to be created, because some models are applicable only for particular situation, and usually not at the local level. She thinks every country should develop its own models according to its own conditions. Some countries are following a new educational paradigm, which is learning, not teaching. She said a study was made in all Latin American library schools, which discovered that three of four schools in all of Latin America are now including in curricula some Information Literacy. She ended by emphasizing that librarians and teachers must work together in order to create concrete projects.

Gould thanked Sabaratnam for talking about strategic planning and succession because they are paramount issues. She raised the topic of people who can bring life skills and information into the education process, which only Raseroka has addressed when she talked about the oral tradition. Gould terms it verbal literacy, and offered Harvard Business School as a good example. Harvard has brought in people from different professions in various areas of industry who may lack academic degrees but have practical experience. She also stressed the importance in creating strategic plans so the work can continue regardless of which elected official or librarian/educator is in charge.

Mr. Hisham Khalil, MENA team member, returned to the point of the quality of teachers. He wants to know how to raise the quality of education and upgrade the teachers, because those who do not possess the knowledge cannot give the knowledge. He commented that the developing world needs the assistance of the developed world-- especially in regards to the transfer of knowledge. The recommendations have to tackle this, concentrating on the ways and means or strategies that can be adopted.

Lau thinks the top priority should be for decision makers. He wishes to develop international policies, standards and norms that could be followed by our decision makers, because some decision makers pay more attention to international organisations than to the grass root people. If the High-Level Colloquium makes recommendations, then local university presidents or high schools may pay more attention to this competence that students need to develop. Lau also is glad that UNESCO is stepping into this subject, because UNESCO is a moral authority around the world. Lau does not think lack of economic resources is a problem, but rather the main problem is the way we think. Even limited resources can be spent so they get a better benefit.
He suggests establishing international standards that could be adjusted to the local political, economical and religious situations. He asked if there is a profile for the ideal teacher-- a job description or list of competencies. He also asked what are the ideal Information Literacy skills that every citizen should have. He provided the example of Mexico City, which has about 200,000 taxi drivers--all of whom lack Information Literacy skills. Lau frequently asks tax-drivers if they have a map of the city; and, nine out of ten times, the answer is no. He elaborated that it is not the taxi drivers' problem but rather it is the passengers' and decision-makers' problems. The city mayor could require taxi drivers to have a city guide; indeed, and an excellent city guide of Mexico

City exists. But the decision makers must have standards to guide their efforts. He concluded with a request to address international standards so they can be available to those who want to adapt them to their local environments.

Ms. Leila Abdel-Hamdy, advisor at the Bibliotheca Alexandrina, emphasized that in all developing countries and in many developed countries as well, there are different levels of society. She pointed out that all children need to be educated, but it can't be avoided that some children have to work, so education should be vocational as well. They need to be able to learn and learn how to work at the same time. Adult education, in general should be stressed, not just education of teachers and librarians. She also wishes to emphasize women because women are at home most of the time with their children so their awareness and their community involvement will help enhance this. Another point she mentioned was that the new generation has a kind of a built-in IT thinking. She gave the example of her six-year old grandson who can't read English yet, but can use the computer. She reiterated that adults need training to be able to keep up with the younger generations. She talked about the Bibliotheca Alexandrina, with which she has been involved since 1993. She feels this is the place where many of the problems regarding Information Literacy can be handled. The Bibliotheca Alexandrina can't reach everyone, so they use the Under-Secretary of Education for assistance in bringing schools to the Bibliotheca Alexandrina, where students are shown how to use all the resources of the library, print or electronic including the ones that Mohsen mentioned. She mentioned another Bibliotheca Alexandrina programme, similar to the American University in Cairo Leaders for Education and Development (LEAD) programme. She pointed out that the problem of lack of coordination, so she sees the bottom line as coordination and networking.

Moore picked up on several points, starting with Abdel-Hamdy's about the need to teach adults as well. She said research shows that the family and community actually have a bigger impact on student learning outcomes than the teacher. Moore appreciated Ponjuan's comments about moving from Literacy-For-All to Information Literacy-For-All and she mentioned we need literacy in terms of being able to make sense of that information. Regarding Hassouna's statement that Information Literacy is not yet linked to the daily life of people because it seems appropriate only to an elite, there is a concern within UNESCO to protect indigenous knowledge, which already makes sense to the people in their daily life. Indigenous knowledge can come from the people that Gould talked about, the elders. Moore continued by saying that involving these elders who have got so much knowledge in an inclusive community will reduce some of the funding problems. She believes we need to do as Lau said, to think differently about the resources at our disposal and their allocation.

Dobrev raised some considerations regarding the demands for training the trainers. He thinks close links to the main information producers should be established. The already existing outreach done by those producers should be extended to the potential trainers for the different target groups. He recommends to look not only within the learning and education sector but also to exploit the potentials of the information industry of the libraries and related vendors, where the information already exists.

Koren said in thinking about the process of education, there is a need to recognise that it covers the range of formal and informal. Regarding informal education, from a child's perspective, everyone is a teacher. It really depends on the knowledge and teaching ability of all the people in the child's life as to how much is learned. She also pointed out teachers very often are overloaded with work; so, if there are to be good quality teachers, they need time to continue their own learning. She recommends school staffing levels should be such that professional development can be scheduled as part of the normal school day.

Abid commented on the UNDP and about Dudziak's comment about Information Literacy as an agent of social inclusion. He asked if there are studies that demonstrate it is an effective agent for social inclusion. If so, many countries would be more motivated to include it in policies. Information literacy should be an international movement to reach the unreached and include the excluded. But this needs to be demonstrated, proof is needed. Good stories are needed, like the magnificent Cuban Literacy Campaign which is now being carried out in other countries, to convince policy makers, so people to understand that Information Literacy is serious and important and that money spent on Information Literacy will save money in the long run.

Breivik summarized that much of what was discussed is clustered around themes that are worth thinking about when making recommendations. One cluster was the need for collaboration, and working together, and partnering, not just with traditional and formal education, but with NGOs and others. The issue of standards has been talked about as well, including the suggestion of international standards that can be adapted as needed in a country. Cultural and social backgrounds create unique needs, so any model or standard needs to be flexible.

 Another cluster is the need for strategic planning, for having an enticing vision to share with others to convince them to come on board, with carrots and with sticks. Champions need to be identified who can take the message forward. Is there a way to make policy makers concerned if they don't do it and to give rewards if they do? There is an idea of not squandering efforts by doing things piecemeal. Creativity is necessary in building on and aligning with existing efforts and clarifying the contribution of Information Literacy within these efforts.

Assessment is another area has been discussed in a number of ways. What kinds of stories, what kinds of research do we have about the impact of Information Literacy on employability, the quality of education, on skill retention? Can we coordinate and collaborate on assessment? The whole resource question is of concern to everybody. How do we align Information Literacy to existing priorities? In regards to resources, how can we think outside the box? At the international level—particularly with UNESCO, we need to ask if incentives can be provided to develop Information Literacy strategies.

She ended with two thoughts: One is that we're really moving beyond the Prague report: moving beyond Information for All to Information Literacy for All. Second, as Dr. Candy said, in the meantime, we are about the business of changing the world.

3 Health & Human Services and Information Literacy
3.1 Lead Sector Expert Presentation by Dr. Phil Candy

Dr. Phil Candy presented a number of questions for consideration: why is Information Literacy important in health and human services and what are the issues and considerations for healthcare practitioners, health care managers, policy makers and also for patients and the wider public? Finally, he wanted to discuss what might be done to advance Information Literacy--conceptually and in practice.

He noted that there are many changes that demand lifelong learning. These are:
- the emergence of new occupations and careers-- a continuous change towards an information society,
- the explosion of knowledge,
- increasing globalization,
- changes in the nature of work, families and communities through changing lifestyles,
- an increasing concern with environmental sustainability,
- a rise of fundamentalism and intolerance, and
- changes in information and communication technologies (ICT).

Candy said that all these changes require a flexible and responsive approach to learning for all, and asked: "How well are we prepared for lifelong learning?" We have educational systems that stress the primacy of the individual learner even though in practice knowledge is often distributed among people, "suspended in a web between them." Our educational system emphasizes teaching not learning--with providers separated from their communities in ivory towers. Finally, the educational systems are place and time bound, whereas the people are mobile and flexible.

He stated that there are four big shifts in perspective that are happening. The first is the shift from the individual learner to the learner in social context. The organisation needs to support whatever changes the learner wants to implement, and they are set in a community that in turns forms part of a society--all of which need to support changes. From individual to society, all need to be in alignment. The second shift is from teaching to learning. It is not enough to have a foundation acquired in school, but one needs to continue learning. Therefore, one needs to learn how to learn.   The third shift is the recognition that learning in school and other formal institutions is only a small part of a people's learning throughout their lives. Learning starts in families (social values), preschools, vocational education and training (VET) providers, universities, business and industry, the media, libraries and information specialists, community groups, professional practitioners, churches and faith groups, and finally government at various levels. The fourth perspective is the digital revolution.

A new approach for education and learning then brings us to a new lifelong learning paradigm. This includes self-directed learning, community partnerships for learning and technologically assisted learning. Information literacy is both a derivative of all four of these and is also a condition of all four.

Information literacy is important in health and human services for various reasons:

- It is vital that all actors understand any documents, charts, records, dosages, treatments, etc., to ensure proper care and accurate diagnosis, treatment and instructions.
- Everyone needs to understand the information needed about their own health
- Governments have a large responsibility – for both ideological and financial reasons.
- Health is increasingly international in scope with migration and refugees and air travel diseases spread as fast or faster than the information about the diseases.
- Health and human services are a large and growing part of the economy with more and more potential for inter-sectoral collaboration such as between education, care providers, insurance companies, libraries, publishers and pharmaceutical companies.
- Within health there is a long tradition of people helping each other. These traditions of self-help on the one hand and mutual support have become even more pronounced since the advent of the internet.
- Information and Communication Technologies (ICT) have a particular impact on the provision of health and human services ranging from e-health and tele-medicine and integrated patient care records to patient networks.
- Health information comes in a variety of forms and formats (photos, text, graphs, CDs, websites, etc.) and, thus, illustrates the multi-faceted nature of Information Literacy. IT is, therefore, a good test site for Information Literacy.
- Health is so fundamental to the human condition.

Candy asked what were the implications for providers, managers and policy makers and the patients, their caretakers and the "worried well."

For the health care professionals the implication is that there is an increasing volume and complexity of information. This means an emphasis on self-directed learning. Since much of this is on the internet, they need both ICT Literacy and Information Literacy skills. The nature of their practice changes as well with patients from all over the world, with different backgrounds and expectations, seeing them in an increasingly litigious climate and with changing power relationships with patients and clients. Increasingly, being on inter-professional teams mean they must master each others' literatures. With the shift from illness to wellness, providers are expected to educate their patients and also possibly to enhance their Information Literacy, but they lack the time to do any meaningful educational work. He noted that all this has implications for pre-service and in-service professional development.

For the managers and policy makers the implication is that there is an increasing emphasis on evidence-based decision making, but administrators are required to pay attention to increasingly diverse expectations from various actors. Also, the scientific paradigm does not also carry over in more complex areas and sometimes there is not enough evidence. Finally, decision makers need skill building in evaluating and weighing the evidence.

Health administrators must be skilled information users and must be able to gain and interpret information fro multiple sources in many forms. Therefore Information Literacy must be a vital component of courses in health administration.

For the patients and their caretakers as well as the "worried well," the implication first and foremost is that everyone is concerned with health. It applies to people of all ages and hence is linked to lifelong learning. Health needs of populations are changing due to changing life style patterns and increasing longevity and patients are increasingly engaged in their own monitoring and treatment. At the political level improved health care is an important social issue with significant public and private cost. Vulnerable groups include prisoners and young mothers and their children.

Health information for patients and caretakers comes in many forms so networks and experts are important. Mutual support networks can be developed around Information Literacy, such as a diabetes support groups, etc. In traditional cultures young people will have to learn to strike a balance between traditional knowledge and emerging knowledge systems. As ICT becomes more common, there is an overwhelming amount of information available, but also increased opportunity to contact others to help interpret it. The ways the information comes at patients is not only though radio and television, but also though recognised public figures. This means that media literacy becomes an important health Information Literacy issue, and media literacy--like Information Literacy--is linked to general literacy. Also, providers need to understand that the patients do not understand the technical jargon and that they can learn from their patients.

Candy asked if Information Literacy is the same as ICT literacy, and if technology has altered the fundamentals of Information Literacy? He discussed the two definitions.

ICT literacy is "using digital technology, communication tools and/or networks to access, integrate, evaluate and create information in order to function in a knowledge society."[9] Candy noted that ICT literacy is not context free but subject specific, and that there are huge intergenerational differences in confidence and competence, with many users being self taught. ICT literacy represents a range of skills and issues ranging from awareness to been "fluent" with ICT.

Information Literacy is being "able to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information."[10] Although there is wide spread support for this, the interpretation of it varies between people in education, government, employers, librarians, etc. For example, the Australian Library and Information Association (ALIA) statement on Information Literacy states it as a prerequisite for participatory citizenship, social inclusion, creation of new knowledge and personal, vocational, corporate and organisational empowerment and learning for life. It mentions that a thriving national and global culture, economy and democracy

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[9] ICT literacy panel, 2002
[10] ALA Presidential Commission 1989

will be best advanced by people able to recognise their need for information and identify, locate, access, evaluate and apply the needed information.

There are different kinds of literacy:

- ICT literacy, which has generic and domain specific elements and requires a partnership between IT and subject specialists, which is cumulative and hierarchical, and which evolves over time.

- Information literacy also has generic and domain specific domains, but these require partnerships between Information and subject specialists. Information literacy is also cumulative and hierarchical and evolves over time.

There are two different packages of skills with a common "digital literacy."

Digital literacy is "to be deeply literate in the digital world and means being skilled at deciphering complex images and sounds as well as syntactical subtleties of words. Above all, it means being at home on a shifting mixture of words, images and sounds."[11] It is the ability to navigate in cyberspace and has ICT and Information Literacy elements, but it is separate from both. It includes the creation and publishing of information as well as appropriating existing knowledge.

Candy discussed what can be done to advance Information Literacy in health. First, greater clarity and precision about the term must be ensured. He said that the views and values of users need to be listened to and taken into account. The contextual nature of Information Literacy, and the fact that some of it pertains to domains that are only for meaningful for some of us, must be recognised. Coordinated national regional and local approaches to developing lifelong Health Information Literacy must be developed, and best practices shared and built wherever they are found. International standards, respectful of different cultures, languages and development priorities, must be developed and supported. The negative effects of one-way transfers of information and ensure information is shared must be recognised, and Information Literacy developed in conformity with the needs of individuals and groups. Wherever possible, stakeholder groups need to be engaged to increase the reach and credibility of advocacy and outreach groups. The mass media need to be harnessed and used. The notion of the resourceful patient needs to be accepted and endorsed, and more mutual respect between providers and clients developed. Special emphasis needs to be placed on training health care professionals to help patients and communities achieve and maintain Information Literacy with respect to their health.

Gray, in *The Resourceful Patient,* comments that patients are seen as highly dependent but are, in fact, very independent and resilient. They are now also able to access research evidence to help them cope and interact with their providers. Research evidence is not the whole answer. It is equally important that people can access, retrieve, understand,

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[11] Lanham 1995, p 161

use and – where appropriate- contribute to information resources and research evidence. This then is the fundamental challenge for Information Literacy in health.

Candy presented the questions remaining for discussion by the regional team leaders' panel:
- What are the key issues confronting Health Information Literacy in each region?
- Are there any domains where each region would appreciate particular help?
- What programmes or interventions does each region have which might be shared and adapted elsewhere?

3.2 Regional Perspectives

Breivik asked that the panellists to begin by discussing any areas related to Information Literacy and health and human services in which the region wished it had more help.

Sra. Ferreiro, Regional Team Leader for Latin America and the Caribbean, described how difficult it was to talk about how Information Literacy impacts on health and human services, because traditionally information specialists do not see issues in these sectors in terms of variables they can control—unless in charge of the Ministry of Health or in policy places. She said that everyone is concerned about the bird flu. Chile is concerned about getting medicinal patents, but she didn't know how librarians deal directly with issues of health. The only thing she's seen is how universities deal with the issue through their schools of medicine, which are supported by specific programmes for students including pathfinders for them to locate information.

Ponjuan says it's hard not to talk about health when speaking about Cuba. Cuba's experience is that the doctor is related to the community; on each block there is a family doctor who works with the local population. Cuba also has a big media campaign telling people to take the correct prescription and to not self-medicate or listen to others who don't know. She said that health and Information Literacy go together. Additionally, she stated that the indigenous knowledge of what should be used must be retained.

Lau says that Information Literacy challenges in the Health and Human Services sector are similar to the education sector, as both are paternalistic; they don't empower citizens to find or use information. However, at the same time, there are some good stories. Regular dates and times for health vaccinations have been established, as well as birth records and similar records for the elderly. He stated that we are paying the price of being part of the global economy, but we are not given enough information as citizens to make the right decisions or be sure of how to promote good values. An example is the lack of information about good eating habits.

 Dr. Rezkanna, MENA team member, thanked Candy for his presentation, and noted the MENA region's concerned about Health Information Literacy. Proper dissemination of correct information can prevent a lot of disasters regarding human health and even epidemic situations. As a doctor herself, Rezkanna uses her laptop and internet connection for access to information, which laypeople lack and are thus more vulnerable

to misinformation. Websites and electronic files for patients are not possible for people in remote areas.

She noted some successful things in Egypt, such as successful media campaigns about poliomyelitis. In every village, there is a neonatal care service. There are also women's care clubs, women wellness centres, including prenatal, and post delivery, and report any birth control defects, etc. She finished by saying that TV and radio are very strong tools in the MENA region. Technological support must be increased, which is a funding issue.

Ms. Raseroka, Regional Team Leader for Sub-Saharan Africa, said that issue in Sub-Saharan Africa about health and human services is that it is paternalistic. If health records exist, they are not for the patients' benefit, but for the doctors. Second, there are two, or three, systems of health care—western healthcare, traditional health care and the new one, faith care. All have their complexities. It can be said the Western method is failing to reach everybody, because hospitals and clinics are scarce and distances are great. So citizens end up with what is available in their locality. In the context in which they live, traditional methods have always been there.

Traditional methods have strengths and weaknesses. The biggest problem has been that they are sometimes no longer believed to be as trustworthy, compared to the Western method, particularly because some diseases, such as tuberculosis, are better treated by the Western method. Where conflict occurs between Western healthcare and traditional ways, faith healing usually takes over.

One of the successes has been in mother and child wellness, which has occurred through oral Health Information Literacy. It is addressed through radio programming and health workers. HIV-AIDS is making everyone concerned about Information Literacy within health and human services; people to think more about the values of people, rather than the information. In fact, she warned, there is a saturation of information. But the changes-- in behaviour, in appreciation of the issues, and in the culture are far more complex than simply giving health information. She agrees with Lau regarding the issues that affect us deeply, the social context, the people's values, culture and attitudes become far more important than whether there is Information Literacy.

Assamoah-Hassan asserted there is a need for information for informed decision making. The infrastructure and facilities for access to current trends in health care are limited. This affects most societies in sub-Saharan Africa. We need to document the indigenous knowledge that is available in the medical sector. Traditional herbalists would rather be the sole source than spread their knowledge to other people, and they die with their knowledge. It can be tied in with good practice; mothers and family are able to pass down good information to children. The media is also important these days. For example, Ghana has a campaign against public urination. The TV shows a clip of a madman, who sees a sane man urinating in public and hits him, saying "you are crazy to do this here." The phrase has caught on with children, and they say it to adults who urinate in public. It's changing people's attitudes.

Ms. Sabaratnam, Regional Team Leader for Asia and Oceania, spoke within the Asian context but continuing where Raseroka left off, for Asia faces the same challenge regarding Western medicine versus traditional medicine. Some governments recognise the need for both and encourage their coexistence. In Singapore and Malaysia, some hospitals provide both types of care.

The biggest challenge has been SARS, which tested the government in Singapore, which took a multi-pronged approach involving many agencies mobilized at the highest levels. The whole exercise created a model that is being well used to address Avian flu concerns. However, some countries don't want to admit the problems because of economic concerns.

She noted communication as an area where help could be needed. She asked if there are materials available to proactively communicate to the different communities. She also mentioned the cost of healthcare. Western health care is generally expensive, so some Asian citizens turn to traditional medicine or self-medication.

Bin Maiden further commented on the SARS campaign, saying in Singapore, all citizens were given a thermometer and taught how to use them. Companies recorded employee temperatures twice a day. Another national level campaign was for the Kidney Foundation. There were issues for the Muslim community regarding whether they could donate or not. The President of Singapore appeared on a TV programme to motivate people to donate via Short Message Service (SMS), a service for sending short text messages through mobile phones, and the programme got the highest recorded amount of donations, making it a success.

Ms. Tovote, Regional Team Leader for Europe, said that Europe is a highly developed and educated continent, but lots of people are suffering and leaving their jobs because of burnout. Europe shares, however, the pockets of immigrants that Wedgeworth mentioned, and there is a need for Health Information Literacy. As Ferreiro said, we can look upon how the universities deal with professionals; they educate professionals other than just those in health to work to in those pockets. She thinks health programmes and ways of intervention could be shared, there, too.

Dr. Wedgeworth, Regional Team Leader for North America, thinks the health sector provides opportunities to make advances that are more distinct than in other areas. He distinguished Lau's statement, emphasizing the difference between education and Health Information Literacy. Health has always been driven by research, it has to a certain extent, guided and informed policy, while education has never had that strong basis in research that guided what occurred in practice.

In terms of Candy's lists of key issues, the ones affecting North America are awareness, cost, relationship of health literature and poverty, traditional medicine versus modern pharmaceuticals. He commended Candy for leading the participants through the definitional issues. He said that although we've been more successful in this area than other areas, one of the leading administrators and policy makers, the Director of National Library of Medicine, recently told Wedgeworth he does not understand what

Information Literacy is. The focus on definition is useful to create awareness. Considering cost, there are estimates that in North America more than 75 billion dollars is wasted because people don't understand their physician's instructions and end up going to the emergency room. This has driven the American Medical Association to be actively involved in Health Information Literacy and the training of health care professionals. There is a strong relation between lack of Health Information Literacy and poverty. The portions of North American population that are the poorest are the most at risk in terms of Health Information Literacy. This is in an era where health information is available and free, thanks to the National Library of Medicine, - available to those who are digitally literate. Those who are not or don't have access to the internet are barred.

There has been success in improving the training of health care professionals in terms of Health Information Literacy. Younger doctors are now willing to sit down with their patients, and discuss the illness and make recommendations, etc.

Finally, there is conflict between traditional medicine and the pharmaceutical industry. The pharmaceutical industry spends millions to discredit traditional medicine. There is also conflict between public health and privacy. Privacy is a strong concern in North America, and one of the major policy issues is the sharing of medical records of patients having similar diseases to order to improve clinical treatments. Advances in sharing of the records are not made, because it conflicts with privacy laws.

The most successful model is the success in reducing the number of smokers in North America, where the research, behaviour and public policy has come together.

Breivik was struck by the commonality of the discussion with the morning's talk. The importance of culture, the environment the individual is involved with, the need for continual learning and professional development are all mentioned. She also noted some real differences; clearly the aspect of Health Information Literacy has a much more aggressive outreach aspect than general Information Literacy. She commented that people from the National Library of Medicine have spoken at National Forum on Information Literacy meetings with a clear understanding of the issues and yet Wedgeworth's example demonstrated the word is not always reaching policy makers, although there have been improvements. She enquired if there are good examples of leaders in health sector, while noting there are few in general education.

3.3 Open Discussion

Gould, while giving an example of rural health care, asked how things were done successfully before sophisticated communication techniques existed. She also points out that there can be too much information, that people don't always have the knowledge to understand what they're reading whether on Medline Plus or WebM.D.

Salem wished to share his rich experience in the field of medical information, serving for ten years as the Director of the Arab Center for Medical Publications & Information, in the Arab Ministry of Public Health, which is part of the Arab League. He established

it to build infrastructure, to build awareness, to collect information about traditional medicine and paraprofessional peoples. The centre developed some databases, which are unique in the Arab countries. One contains the addresses of all the hospitals in all 22 Arab countries, a second was a Who's Who of the medical scientists in Arab countries, and a third contained educational institutes and schools in Arab countries.

Rezkanna commented that the Egyptian Minister of Health started a Data Management Centre, based on a geographical map, which relates each governorate with its health problems. The Minister also encouraged the formation of a database of herbal medicine.

Abid wished to comment on Gould's comment about rural health care. UNESCO has been promoting a number of Multipurpose Community Telecenters (MCTs) , equipped with radio or TV broadcast station, which include community multimedia centres. They provide access to information which is mainly available through the internet, through mediators. In MCTs, there is no guarantee provided by the mediator. In the community multimedia centre, there are a few cases regarding medical information where the reply must be validated by a doctor. After the mediator researches, the comment is reviewed by a doctor before being sent to the community member.

Hassouna sees two problems. First is getting information about normal health care and second getting information about dangerous epidemics and health hazards. In the Arab world, information about normal health care is confusing because there are so many experts. In addition, going to the doctor or a pharmacy is expensive, so instead people ask friends about their experiences, and then self-medicate. Creating reliable information about dangerous epidemics and health hazards is difficult because people mistrust both the government and the information it provides.

Dudziak considers quality of life to be an important topic. Another topic is the science popularization movement. In Brazil, there is a programme called social technology programme which links teachers to people of the community in search of simple solutions for population, simple technologies, such as sanitary solutions.

Abdel-Hamdy feels that Information Literacy should be handled one way for all sectors and that there should be an overall structure for Information Literacy. The Bibliotheca has partnered with the University of Pittsburgh getting Supercourse, which has over 2000 PowerPoint presentations and lectures for use by any teachers doing public health or epidemiology courses. They are available copyright free through www.bibalex.org. Another initiative at the Bibliotheca, since 2002, has been a biannual conference with Biovision Lyon.

Boekhorst agrees with Abdel-Hamdy that we must consider Information Literacy as a basic competence, irrelevant of the fields, but it must also be extended into the specific fields.

Ferreiro is grateful to Dr. Alex Byrne, Lead Sector Expert for Economic Development, for clarifying the issue between Health Information Literacy and Information Literacy during a break. In terms of Information Literacy, she sees a potential role for it as an

early warning system for things like new biotech applications. She asked how we can bring important critical information, whether new or something from the past that can be also useful today, to the attention of people in relationship to health or citizenship. Another important issue is to work with those who are in a position to work with students in the areas of Health and Human Services so they can become better professionals with solid values. She also said there needs to be keepers of the memory of countries, who can capture indigenous information (even if they cannot assess it) and insure that it is made available. She is interested in having "authoritative blogs" that can bring such information to the people's attention.

Breivik returned to Boekhorst's earlier comment. When the National Library of Medicine people came to speak at the National Forum on Information Literacy, they said it is unlikely people will ever become health literate if they don't learn how to be information literate in the education process. The issues overlap. There are several levels within the higher education setting, where Information Literacy programmes focus on health information. This occurs when the whole curriculum is structured around problem-based learning. For example, at Wayne State University, the Head of the Medical Library was part of the small core team that redrafted the entire curriculum with the aim of teaching doctors to find the information they needed rather than listening to lectures. Whenever there is any health related programme at a community college or university nursing programme, it needs to have a well thought-out Information Literacy curriculum build in. Innovative programmes may also be used, such as one at the Medical Library at the Wayne State University which brought in 10 students from an inner city technical high school, largely minority, at-risk students, who had little possibility of going to college. The students spent half their time helping the library. In the other half, they were offered learning opportunities on how to access medical information online and from other sources. The end products were pathfinders on a particular disease or health problem that were made available for use by the public. For the students, it was an incredible introduction to higher education, to libraries and to Health Information Literacy. It was something they could relate to and take great pride in doing.

Wedgeworth perceived a conflict between approaches to Information Literacy, specifically Health Information Literacy, and lifelong learning. In order to really adopt the concept of lifelong learning, he stressed, we must recognise that much of education in the future will take place outside of schooling. Learning and schooling are two different things. An example in the Health Information Literacy area is the very rapid growth of men's and women's social groups that discuss things related to health, which they didn't do previously, because of the wide availability of information that are distinct to the genders. This has raised the level of Health Information Literacy in those community groups.

He returned to the example of adult education, stating the concept of Information Literacy will be difficult to get across to a general public; but it is easier regarding the subcomponents, such as Health Information Literacy. People are motivated to know more about their health and the health of their families, and how to support their children to be successful in the education system. This will drive them towards the sub-

sectors of Information Literacy faster than to the general concept of Information Literacy.

Ponjuan has been pondering the conflict and is concerned about the emphasis on health rather than on services. She thinks there are important dimensions to be considered, related to national policies and to the culture of the profession which have not been mentioned yet. For example, doctors in some countries, hear and prescribe but do not explain anything to the citizen. In other places, doctors are like teachers. They explain, they give facts, they teach the citizens; and those doctors are making a big contribution to Health Information Literacy. That's part of the culture, and some recommendations should come in this sense.

Breivik asked for Ponjuan to expand about services. Ponjuan replied that only health is emphasized, and not services, out of the subject of health and human services. If she divided the problem, industry and agriculture can be fit into economic development, and all sectors which contribute to the economic development of the world. Education and learning is a particular field, as well as governance and citizenship. For her, there is a conflict when she sees only health, in health and human services because there are many services of which we have not spoken.

Cambridge returned to the question of Health Information Literacy and Information Literacy. In a small community in Northern California, Vietnamese families did not use the doctor when their children were sick. One of the universities chose to have a service learning project, for students who were learning about Information Literacy, to interview the families about why they were not taking advantage of medical facilities. It turned out there were myths regarding what would occur if they went to a Western doctor. At the same time the students were learning about the Information Literacy process, they were also participating in Health Information Literacy in the community. She wonders whether there are other instances where the two can be brought together.

Horton shared a conceptualization that helps distinguish between Information Literacy and Health Information Literacy. He started with the idea of resources. To solve any problem or make a decision requires human, financial, natural and information resources. Rarely does a major problem or decision get solved using only one resource, rather combination is usually required. Resources can be substituted up to a point. Sometimes as a strategy, we may decide to take a human-intensive approach, or another-intensive approach, but there are tradeoffs doing it that way. If information is thought of as a resource, it helps think of that resource as not the beginning or end of solving the problem.

Gould coordinates a diabetes prevention program through storytelling geared to pre-school to 4th grade, working with teachers, parents and the students. She is also involved in a teen program, STDs, HIV and pregnancy prevention. It is a peer-based program, which looks at working with families, children, etc.

Lau has learned this afternoon that we need to put Information Literacy within a context. The health stories we have been discussing could help promote Information

Literacy. What governments do in health services (e.g., promoting vaccinations) could be employed in the same ways for promoting Information Literacy.

Byrne expressed his concern that the discussion does not center around Information Literacy, but about getting out health messages and a whole range of other things which are related to information dissemination. The latter are valid and worthy things to do, but not specifically about Information Literacy. Information Literacy is about practices, recognising information needs, etc., which are applicable to the domain of health. As Lau said, we have to contextualize; but, not to the extent that we end up talking about dissemination of information. We're talking about the higher level skills that are applied and contextualized in that field.   Some of the dimensions that have not come out or just tangentially touched upon are issues of misleading information, incorrect information and dangerous information—all of which makes Information Literacy more important in the field of health. The higher level message we should be striving for is if you seek out information, and don't have the skills to evaluate it, you place your loved ones in jeopardy. That is the sort of goal identifiable in global statements. This provides a way to emphasize the importance of Information Literacy, and how having an Information Literate community leads to having a healthier community.

Wedgeworth said that Byrne's comments took him back to Prague, where they struggled with how they see the various components of Information Literacy. Participants left Prague with the understanding that Information Literacy reflected a spectrum of literacies, and Information Literacy was an umbrella term. They specifically rejected seeing Information Literacy only in the context of higher level skills. Information literacy is an inclusive term. If it is seen in terms of higher skills only, it becomes exclusive, eliminating a number of people that should be included.

Moore started reviewing her notes regarding a model looking at the relationship between an educator and a learner.   She replaced educator with health worker, and the learner is still there, as client, or patient). The health worker has got resources, learning objectives (in terms of what sort of message to send), and an instructional design for getting that message across. To come to the other side, the learner, is where she takes issue with Wedgeworth's comments. She says that meta-cognitive research on thinking about thinking shows that the higher level skills are an extremely important, fundamental part of all learning. The learner knows something about himself as a learner; he has some knowledge about materials or resources, knowledge of his learning objective. The thing that connects health worker and client is the Information Literacy on both sides. If the health worker is highly skilled in Information Literacy, he or she will set up a different message for the learner. The two come together well when you think about Information Literacy as thinking with information.

Wedgeworth agreed, saying what came out at Prague was the relationship between Information Literacy and information communication technology (ICT) literacy.

Byrne thinks Wedgeworth misunderstood him. He clarified that when he spoke of higher order, he was speaking in the philosophical sense; he was not making an elitist judgment, precisely what Moore was just discussing. He pointed out that it needs to be

contextualized. Very few people, except probably the people in the room, are interested in Information Literacy per se; they are interested in Information Literacy in context. He shared his concern that we've lost sight of that, and focused on the actual dissemination process, the actual information itself, not the meta-skills that are needed so people can become active agents in gathering information, evaluating it etc. We need to return to that level.

Breivik noted several things. First, that participants were caught up and excited about preventative care programmes because they are so important to so many people, but they need to step back, as the focus is on empowering the individual. It's not about people having access to media or computers. She gave the example of infant diarrhoea where there are long established methods to deal with it. However, not all websites present the agreed upon steps for treatment; even the website of a major university with a medical school missed one of the steps.

She said that the discussions had clarified that Health Information Literacy is Information Literacy in a particular arena of information. She also noted the Colloquium is limited to a selected list of concerns. Because of shortness of time, every topic and how Information Literacy relates to it could not be addressed. The ones discussed here grew out of what was addressed, and refined at the Prague Conference. However, there are a lot of commonalties across sector lines, for example, addressing real people's information needs, in specific contexts and cultures. We need to be strategic and target efforts. The emphasis is not just about improving Information Literacy in formal education, but in informal settings for lifelong learning.

4 Economic Development and Information Literacy
4.1 Lead Sector Expert Presentation by Dr. Alex Byrne

Taking a broad approach and focusing on those areas where results may be expected, Byrne discussed Information Literacy as a foundation for economic development. He stated that economic development is vital to creating a more equal world; it builds on strengths of each nation and seeks new areas of strength. Globalisation demands that nations find competitive advantages and it depends on information and the ability to identify and apply it. Further, globalisation operates across the economy such as for rural and village workers, artists and artisans, mining, manufacturing, service sectors (health, finance, legal, IT, architecture, etc, government (local, provincial, national, pan national), etc. Additionally, it is driven by international agendas of WTO, International Monetary Fund (IMF), and World Intellectual Property Organization (WIPO). This favours those with advantages such as textiles from China, pharmaceuticals from USA and Europe, etc. Yet distortions through subsidies and protectionism are frequent.

However, economic development is not solely about economics. There are other factors such as mentioned in the UN Human Development Index and Report that are important in providing good lives for citizens. As an example, women are often controlled and excluded as are oppressed minorities and indigenous peoples.

Byrne said that the three pillars of International Federation of Library Associations (IFLA) are society, members and the profession. Libraries and information services serve society by preserving memory, feeding development, enabling education and research, and supporting international understanding and community well being. He noted that IFLA works on the matters which affect library and information services globally, including: intellectual property, privacy and other legal issues, censorship and other barriers to accessing information freedom of expression and ethical concerns, protection of heritage and library services in times of conflict as well as the major international issues relating to the information society.

IFLA's engagement with the World Summit on the Information Society (WSIS) helped emphasise the needs of society. The Declaration of Principles and Plan of Action recognised the importance of libraries and information services and the key issues of concern to the sector.

IFLA has also used its influence in the Presidential Committee for the International Agenda on Lifelong Literacy to identify priorities and propose strategic actions in the international agenda on literacy, Information Literacy and ICT literacy; as well as the role of IFLA in fostering the overarching concept of lifelong literacy as one of the main contributions of libraries in society.

Byrne commented on the many disasters that occurred in the last year such as the tsunami, the earthquake in Pakistan and a slew of hurricanes—all of which stress economies. Disasters underline the fundamental global importance of ready access to good information *and* the capacity to use it effectively. Information Literacy not only save lives but minimises economic damage. He offered the example of a ten year old girl, Tilly Smith, from Oxshott, England, who saved over 100 people on a Thai beach on 24 December, 2004, because she was information literate.

Local knowledge systems are important and can offer economic advantages to the people who have the knowledge. Problems arise when knowledge systems conflict.

Literacy is a social practice and as such is not black and white. We need to understand literacy not as a bipolar entity (literate – illiterate) but as a spectrum of competencies (multiliteracies)[12]. Literacy is a set of skills applied in a social setting and affecting economic development. Literacy as a practice focuses on what people do with literacy in cultural and social contexts and reflects contextualised goals.[13]

Information literacy likewise includes a set of skills such as effective information seeking, informed choice of information sources, information evaluation and selection, ease in using a range of media to best advantage, awareness of issues of reliability and bias, and effectiveness in transmitting information to others.[14]

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12 M Kalantzis & B Cope (eds), *Multiliteracies: literacy learning and the design of social futures*, Routledge, London, 2000
13 I Kral & RG Schwab, *The realities of Indigenous adult literacy acquisition and practice: implications for capacity development in remote communities*, Centre for Aboriginal Economic Policy Research, Canberra, 2003
14 P Candy, *Information literacy and lifelong learning*, Information Literacy Meeting of Experts, Prague, 2003

Information literacy has many dimensions. Ross described people as "... active consumers of information rather than as passive, robotic vessels into which information is poured. Information Literacy plays a role in enabling people to connect with information, and interact with it, in meaningful ways and to put the information to purposeful use." [15] Dervin summarized it by saying, "Information is only useful to people if relevant and if they can make sense of it." [16] The important lesson here is that Information Literacy, like all local knowledge systems and like literacy, needs to be seen in a social and economic context to make sense.

Information literacy is not the top of the layered cake consisting of (respectively):

> Basic literacy
> Functional literacy
> Information Communication Technology (ICT) literacy
> Information literacy

Information Literacy is the core literacy which makes the others possible. Information Literacy operates not only in literate societies but everywhere including oral societies.

SCONUL's Seven Pillars of Information model then comes in question. Bringing Information Literacy to the core rather than to the top, changes the model by making it more multi-dimensional.

Byrne emphasized Information Literacy is fundamental to economic development, because economies work on information and transmission of information. The creation of an information society is a key to social, cultural, and economic development of nations and communities, institutions and individuals in the 21st century and beyond. It empowers people and enables them to take control of their lives and avoid control from external forces. Therefore, Information Literacy should be an integral part of Education for All and can contribute critically to the achievement the United Nations Millennium Development Goals.[17]

Information literacy also works in the area of business. For example, the University of Colorado Technical Research Centre (CTRC) and the Technical Information Service (TIS) at Purdue University, have both established successful businesses by providing companies with data and documents required to make strategic business decisions. Similarly, Fairfax Limited Library in Australia provides strategic knowledge vital for their parent corporation. Also, the National Library Board (NLB), Singapore has a strategic role "to expand the learning capacity of the nation" and enhance "national competitiveness." Finally, the Libraries and Knowledge Centres (LKCs) in remote areas

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15Todd, Ross (2000).
16Dervin, B, et al. (1986).
17 Information Literacy Meeting of Experts, Prague, 2003, available at:
http://www.ched.uct.ac.za/cil/Prague2003/Report.htm

of the Northern Territory, Australia, help preserve traditional and local knowledge and help develop Information Literacy to access external knowledge.

Such efforts do not always work. For example, the database on Advanced Manufacturing Technology developed for the Australian Department of Industry, Technology and Commerce in 1987 aimed to provide tailored information for a range of client groups but ignored social context and Information Literacy. It failed because it was not used.

Byrne reminded the audience of the important key domains: employability, participation--especially of women, skills retention, new occupations/careers that currently do not even exist, new enterprises, small and medium enterprises (SMEs), start ups, rural and remote, least developed nations, land-locked and island nations.

The capacity to access, assess and use information effectively in our daily lives is only one of a number of literacies but it has been called "the overarching literacy essential for twenty-first century living."[18] In a wider sense, it is a set of capacities, skills, behaviours and attitudes which transcends the medium of information exchange--not a property of information technologies, publications, written culture, or specific disciplines.

Gen Y are those born in the 1980s and 1990s (including Tilly Smith). They have grown up with PCs, Internet, file sharing networks, SMS, cheap & fast global communications and are adopting new technologies such as wikis, blogs, pod casts.[19] However, they are at best 10% of the global population of young people! Therefore, a broader global view is needed.

Byrne discussed the illusion that "one day we will eventually get to universal Information Literacy and then we can all go home." He stressed that will never happen because, by its very nature, Information Literacy is about learning and will never be done. Lifelong learning means just that.

Byrne reminded the participants of the UN Millennium Declaration goals, which are:

- eradication of extreme poverty and hunger
- achievement of universal primary education
- promotion of gender equality and empowerment of women
- reduction of child mortality
- improvement of maternal health
- to combat HIV/AIDS, malaria and other diseases
- ensuring environmental sustainability
- development of global partnerships for development for the attainment of a more peaceful, just and prosperous world

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18 Bruce, Christine (2002)
19P Sheahan, *Generation Y: Thriving (and Surviving) with Generation Y at Work,*(2005)

He drew attention to the World Summit on the Information Society (WSIS) Declaration, which states:

> Each person should have the opportunity to acquire the necessary skills and knowledge in order to understand, participate actively in, and benefit fully from, the Information Society and the knowledge economy. Literacy and universal primary education are key factors for building a fully inclusive information society, paying particular attention to the special needs of girls and women. Given the wide range of ICT and information specialists required at all levels, building institutional capacity deserves special attention.

He also provided IFLA's official comment:

> Lifelong literacy is the theme of the current IFLA President, Kay Raseroka. It emphasises the role and responsibility of libraries to assist children and young people to develop the range of competencies necessary to engage fully with the Information Society. Libraries and information services provide secure, professionally supported, environments in which the literacies can be developed. Library associations in a number of countries have developed and adopted Information Literacy standards which guide the development of sound skills.

He wondered whether that goes far enough since it does not describe the effects libraries have. The development agenda which is now being promoted in WSIS and WIPO is a major step in discussing global intellectual property issues. It contends that all international processes will be inadequate if not linked to an agenda which reduces global inequity.

He pointed out the continuing challenges to be:
- *Urgency* – we need to continue refining our understanding of the issues while using what we have.
- *Evaluation* – we need evidence to identify effective strategies while we implement them.
- *Unpack "lifelong learning"* – this is not preparation for lifelong learning but "creating the habit of learning" (borrowing from Barbara Cambridge).
- *Long-term impact* – what is it that contributes to economic development?
- *Link to key issues for people* or *relevance.* The Information Literacy agenda needs to be linked to real issues and to be applied in real life.

He explained the points of influence as being business and industry associations, local development agencies/chambers of commerce, government extension services (agriculture, business development, e-commerce), educational institutions (especially business courses, MBAs), media (especially radio), NGOs, and knowledge networks.

He believes that the key targets are those left behind but important in economic development. For example, women as mothers *and* workers, the unemployed and underemployed, traders seeking business advantage, NGOs and other knowledge networks. He said support for this can be found in government (extension & other

agencies, funding), libraries, information centres, tele-centres, media (especially radio), industry associations, information suppliers, intergovernmental agencies (UNESCO, UNDP, UNICEF, Food and Agriculture Orgnization of the UN (FAO), International Telecommunication Union (ITU), WHO.

He offered suggested strategies to employ, such as working with existing networks and organisations, to build knowledge networks and share and create knowledge and develop Information Literacy, to try to identify emerging fields of knowledge and professional practice, and to create learning communities which transcend boundaries.

Byrne commented that there have been very useful suggestions in the regional meetings, including partnering public and private sector enterprises (e.g., internet cafes with libraries), encouraging governments to provide tax and business incentives to private enterprise for Information Literacy products and services, and promoting series of Information Literacy and Lifelong Learning flagship projects to help school drop-outs, the unemployed and the underemployed.

He explained the traditional approach to be a "push" approach ("You must do this, because it will be good for you.") which has limited success. He prefers a "pull" approach which by, demonstrating the desired outcome, will pull in the resources. In other words, he suggested focusing on outcomes/outputs rather than inputs. The next step would be to look at results, using key measures, such as the UN Human Development Report indicators as well as Organisation of Economic Co-operation and Development (OECD) & IMF standards. As a final statement, Byrne reiterated the need to work with those who have influence such as the industry leaders, champions, influencers.

4.2 Regional Perspectives

Dr. Hassouna, of the MENA team, emphasized that Information Literacy is not a goal in itself, but a mechanism towards something more important: empowering people. She raised four major topics: the prevailing climate, the issues or challenge in the area, target key players, and best practices. First, the "climate" is one of pressure of globalization, market economy, privatization, mergers and all these things can lead to higher rates of unemployment. As a result, one of the important issues is that both people and government feel threatened by changes in lifestyle. For people economic development means more job opportunities and increased income; for governments, it means ranking competitiveness and attracting foreign investment. Additional issues are the need to reform the education system and the short-sightedness of the business culture as it is driven towards quick profit and lacks transparency and disclosure. There are unbalanced relationships between employers and employees. There is not enough budget allocated for research and training. There are problems regarding vocational training responding to market need in developing countries. It can be depressing, when international donors offer training programmes, but the message is not really delivered. It is just being done for the statistics. The substance is ignored in favour of checking off a list of items. Finally, the issue of financial resources creates major problems. We can't

wait for a reformed education system; the business culture must be changed now. We are in the stage of ICT, but do not yet have Information Literacy.

The key players to be targeted are government, communities, unions, business sectors, banking community, NGOs. One of the best practices in Egypt is a social fund for women, which offers microfinance and training programmes for women. Additionally, the Ministry of Finance is simplifying the Investment Laws. The National Competitiveness Council overviews Egypt's ranking and explores what is necessary to globally compete. Less than one year ago, an association was established for the unemployed. It discusses the problems and strategize with the government.

Ms. Raseroka, Regional Team Leader for Sub-Saharan Africa, said the bottom line in Sub-Saharan Africa regarding what motivates demand for increasing Information Literacy is the economic sector. Her colleagues are strong on linking the motivation to the laws of need. They return to the Human Development Index and they look at how to link Information Literacy and economic development. They also do a lot of research about what drives the average illiterate market woman, who is a fantastic businesswoman. It has been said that Ghana would have no market economy if you stopped the market women, as they are the economic engine. They have Information Literacy skills, and we must discover how they work. Additionally, the difficulty is that governments are still driven by external demands, like the IMF, and they are not focusing internally. This requires looking at advocacy again.

NGOs are very busy in the region, but there is no communication. Additionally, governments do not recognise the importance of NGOs, which is probably linked to government's fear that NGOs will become too powerful.

Sub-Saharan Africa has a big challenge in terms of how it works with Information Literacy as a pattern that is rooted in an oral culture. There is a defensive approach to knowledge; information is power and there is no benefit in sharing knowledge. They need help in research and development at the grassroots level. They don't deal with the businesses, for the same reasons that Hassouna mentioned.

Ms. Assamoah-Hassan, Sub-Saharan Africa team member, added that one of the major challenges is the need for awareness of Information Literacy as a vehicle for success in business and production. There is also a need for Information Literacy programmes and models that can be imparted through workshops and seminars, to empower people in the business sector. She offered three examples of best practices: (1) elders pass down information orally about family businesses, and the market women benefit from it; (2) market women trade with international partners which they do through reliable interpreters; (3) development of consumer associations that are making the customers information literate about goods and services.

Wedgeworth said that the perspective of North America must begin with an awareness of the economies and noting there is a great difference between America and Canada. To oversimplify, Canada has a more general respect for education than the US has. The recent U.S. administration has invested in skills development, and any federal funds

invested must be directly related to jobs workers can fill. It can't be for general education for workers or worker's role in civil society. There is turmoil generated by global competition. Industry has tended to make decisions that force workers to bear the brunt of competitive changes. In terms of targets that Byrne laid out, immigrants are especially important. Between 1980 and 1990, immigration increased 190%, and in the following decade the educational attainment of immigrants was lower than any previous decade. Large numbers of people are coming for the economic advantages, but are bringing less in terms of their educational attainment; and there are no requirements for acculturation, unlike in the Netherlands, to give immigrants education to make them better suited in the American markets for work. Information Literacy is not widely considered outside libraries and institutes of higher education. We lack a rationale or policy that could incorporate Information Literacy in a way that could benefit economic development.

Part of the problem is funding for when it is made available in a narrow construct, the opportunity to promote economic development is severely limited. There are many exceptions because the US and Canada are such large countries. For example in tertiary education, universities have a strong orientation towards research, which creates new industries, new technologies and new processes for economic advantage. On the other hand, community colleges and two-year colleges have done a much better job of looking more broadly at the kinds of education that workers need to fill new jobs. Another example is that of that Indiana which as a state has done a very good job of looking at the employment of Information Literacy in preparation of workers. It is an unusual situation because Indiana is the home of the Lilly Foundation, which is one of the top five endowments in the country. With the influence of the Indiana Chamber of Commerce, it has focused on preparing Indiana workers for current and future occupations.

He said that Toyota announced over the summer that they were building a new plant in Canada. Although Toyota denies it, a Canadian spokesman said Toyota was going to avoid some of Nissan and Honda's problems when they put plants in Southern U.S. and had to invest in some significant worker training programmes to enable workers to use the plant equipment. In Canada, the workforce was more broadly suited to this type of work. There are competitive pressures in North America, which need to be met. In terms of advancing Information Literacy, we need broader range of organisations that are committed to advancing those concepts.

Wedgeworth also placed great emphasis on the role of NGOs in advancing Information Literacy for economic development. They've had an enormous influence in the US, but now they're not as important in the mix as the government looks at how to keep its work force competitive in the future.

Breivik noted that economic development cycles used to be four years, but now take longer. People used to return to basically the same jobs, but now the new jobs are changing so drastically, it takes people longer to figure out they cannot return to the same jobs and get training for the new jobs. Information literacy has two major roles to play in this environment. It can help workers figure out sooner and easier in which

directions they should go for retraining; and it can be part of the training, so the employees will be more effective in their new jobs.

Dobrev shared some considerations regarding the demand for economic development and Information Literacy in Europe, and particular in Eastern and Southern Europe. He considers Information Literacy development a process without end, in accordance with the concept of lifelong learning. Second, Information Literacy for all depends on three main factors: general literacy level, ICT literacy level, and e-readiness of the particular country/region. He noted that Information Literacy is information-content dependent. You may have well developed Information Literacy skills among academia, but if they jump to business, they lack any skills.

The approach in South-eastern Europe is clustered, as much as possible, by various factors. Economic development is a driver for Information Literacy, and Information Literacy is a driver for economic development. Countries with high levels of economic development and e-readiness have fewer problems with Information Literacy, and vice versa. The situation of new member states of the European Union (EU) is that their economic development can be characterized by the difficulties in their efforts to adapt to the requirements of the EU market. The second group of countries, candidate countries like Bulgaria, Romania, and Croatia, are still structuring reforms to complete their prioritization process and attract foreign investors. The third group of countries, like Albania, Serbia, Montenegro, the former Republic of Macedonia, Bosnia-Herzegovina, are on the way to recover their economy after the war, and to open to international corporations.

His conclusions, about the prerequisite for Information Literacy development in south-western Europe, where rapid economic development is expected to continue, is that there is a strong and well established infrastructure and good capacity of ICT professionals. Where these exist, the EU regulations will transform the small/medium businesses, and will data mine more demand for Information Literacy. The Information Society is on the agenda of most countries, and most will participate in the WSIS next week in Tunis. The bad news is that there is low internet penetration, low ICT literacy, a large digital divide between big and small cities, and few e-business applications. The target groups are similar to those previous mentioned: schools, public administrators, universities, small and medium enterprises, the elderly, minorities, unemployed people and small communities. The key players in the Information Literacy development are the libraries, NGOs, governments, universities, the ICT industry, and the media.

Some examples of good practice are in Slovenia and Bulgaria. Slovenia has established a National Information Literacy Point. Bulgaria has a two-year programme to equip schools with personal computers to meet the EU average. Another programme is establishing the I-centres, or public access points, in countries with low internet penetration. These are in public libraries or shopping centres. Another interesting project is the mobile internet users points, equipped with internet and a specialist, driving around the mountains and villages, where it is not easy to establish ICT structures. There is a huge training programme in the administration to develop e-government, and deal with ICT.

Regarding recommendations for Southeast Europe, the first challenge is to get more computers and to establish public internet access points. Information Literacy components need to be added to computer training programmes. All the countries need Information Literacy strategies. Dobrev is authorized by the Bulgarian State Agency for Information Communication Technologies to suggest their willingness to organize an Information Literacy Regional Centre, to coordinate the efforts of the key players to promote and develop Information Literacy in Bulgaria, Serbia, Macedonia, Romania, Montenegro, and Albania.

Boekhorst added that in the Netherlands, which is slowly recovering from the economic crisis, the overall percentage of unemployment is not high, but it is unevenly spread. The second and third generation immigrant families have a higher rate of unemployment. There are a lot of school drop-outs, which has a direct relation to schooling and Information Literacy. Those who finish school have difficulty finding work and have feelings of discrimination.

Sabaratnam said it is critical to determine what we're going to do in the area of economic development and to achieve some of the targets Abid shared yesterday regarding the Millennium Goals. Similar to Raseroka, she reflected on the issue of Information Literacy and information dissemination. We are not communicating effectively. For example, Gould's diabetes programme, -- if taken a step further, in terms of what we as librarians, or different communities can do, we are actually making the person more literate about the subject, and preventive measures that can be taken. This reminded her about the multi-pronged approach to SARS--brochures in mailboxes describing prevention and identification, combined with schools educating their students to help monitor the elderly at home. Young people took their grandparents' temperatures, and informed their parents.

She described Library 2000, the national plan for transforming the libraries in Singapore. She looks at libraries as one way of promoting Information Literacy, but notes that they can't work alone but must work with governments and NGOs. She sees the role of libraries in learning as one of space. In Asia, in promoting social inclusion, the problem is how to grant everyone access to information. One of the solutions is to promote the library as a place for them to interact and learn--not just from the books, but from the space and programmes and people there. It is also a place for professional development. The Singapore Library's role is to expand the learning capacity of the nation, as well as national competitiveness. This vision allowed Libraries to get large funding from the government.

The library also has a role for economic development as it gives knowledge and skills to people that will make them more competitive. For example, the New York Public Library has a business information service, as does the Saba Public Library, which teaches business people about the sources of information available, how to locate it, and how to use it to seek business opportunities. The library bears the cost of these services to the community.

There is also a need to have decision makers understand the role libraries play, or the set of skills librarians have in looking for information. Particularly in Asia, it's a question of how we market and communicate ourselves. She has seen libraries, doing good work, close down because people think they can find all the information themselves. The information industry in Asia is still young; most foreign players don't have representatives. There is a critical role the library can play; it can open possibilities and show people there are specialized information services. We're drowning in information, but starved for knowledge which is applicable to the economic community. It can't be only the librarian who knows how to find information; we have to teach the community members skills to help themselves stay relevant. It is important to understand what the government's priorities are; it helps to know how proactively to approach agencies to help them and to get what you want.

Another problem is structural unemployment. As countries move to higher value-added service, production work moves to other countries. When that happens, the people without the right skills lose their jobs. There are agencies in Singapore that help workers learn new skills. Some countries work with unions to train their members in new skills. There is also an annual month long Learning Festival in Singapore, which other countries emulate.

Informal human networks are very important in Asia, as much of the information is not online. She was impressed with the Kuala Lumpur Stock Exchange's Library which took information to the 11 districts, in order to promote the stock exchange. It was successful.

Ferreiro said Latin America is comprised of eighteen countries plus the Anglo-Saxon Caribbean, and their economies are quite different. She groups them into three categories, each of which have very different approaches: (1) free-market economies, (2) protected economies, (3) ethnic group economies. For instance, Chile has been a free-market economy for 18 years. When it became democratic, the whole culture became an export economy. Everyone was immersed in the Information Literacy and economic environment. The export culture requires understanding the culture of the countries where you would like to export as well as ISO standards for each product. Ferriero gave the example of cherries. In Chile, they're eaten casually, but in Japan they're very expensive and sold in a small boxes. It was difficult to get the women who prepare the cherries to prepare them with sufficient care for the Japanese market. So the company trained the women on the culture of Japan, and explained what is valued in Japan. Libraries, chambers of commerce, etc., are all intertwined in working on these issues. Growing a good economy takes time. She reiterated the value of information is so valuable when countries are trying to increase their per capita income and provide people with a better quality of life.

There are difficulties with indigenous populations in various countries, which have their own languages and own economies. Many of them are connected with groups throughout the world that promote indigenous cultures.

There are challenges regarding copyright and piracy, which is a big issue in economic development. She wonders how countries can be turned into service economies. Finally, Latin American is concerned about proficiency in English and Chinese.

4.3 Open Discussion

Dr. Breivik asked that we limit the open discussion to focusing on empowering people to be able to locate, evaluate and use information effectively.

Dudziak asked the group to consider links between science, technology innovation and economic development, explaining that all of the systems need to work together for economic development.

Ponjuan said that we need not only Information Literacy but also an information culture; and that must be our next goal. Within that culture women must play a great role. Children and elders could also play a great role in the transmission of information.

Libraries have a great role in economic development. We need a repositioning of librarians. Library schools must try to prepare more competitive and motivated professionals. Last, a very important approach is based in alliances and collaborations. This contributes significantly for improvement of quality of life and economic development.

Horton endorsed Ponjuan's use of an information culture. Based on his personal experiences in many countries, he has noticed a distinctive information culture in each one. He hopes that the concept will enjoy priority attention in the final deliberations tomorrow.

He was also struck by the emphasis on consumption of information--not on the production of information. You must give equal time and attention to both sides of the equation. Trying to use Information Literacy to help someone become a better information producer is socially and economically important. For example, in Africa and Asia, there are complaints about indigenous information not made available. There are huge gaps in statistics and databases because of that--not simply impacting on the production of information goods and services but on all kinds of goods and services.

Boekhorst raised the issue of child labour. If children can't go to school, they can't learn and prepare themselves, which puts them in a bad situation. Also, as Ferreiro referred to, there are many reports of the importance of scientific information for economic developments. However, access to that information is very expensive. So the open access movement might be very important for economic development as well.

Moore thought about the education angle that goes with the Information Literacy for the business sector. There is a need to provide timely information and timely support for Information Literacy development. Business people often don't have time to go away for their training, they need it on site. An online programme running in New Zealand,

by four libraries, called "any questions" supports children doing their homework. She thinks the model could be applied to business people.

Tovote commented on Dobrev's presentation of economies in transition. It is interesting to observe how Information Literacy-driven they are. She also feel institutes of higher education need to know what explicit Information Literacy demands employers make of employees in order to provide the appropriate training.

Lau began by saying that the American continent is unique in terms of development. It has the wealthiest country on earth and one of the top five (Canada). It has middle class countries like Brazil, Chile and Mexico; and, at the other extreme, it has both low income countries like Bolivia and Peru and countries that have almost nothing like Haiti. The other regions are more or less even in terms of development. What makes this difference are the types of education. The U.S. and Canada have educational systems that are constructivist. Mexico has a rote education system, which leaves little room for Information Literacy. There is a big task to fix this, which libraries cannot do by themselves. The system cannot be changed, because unions dominate the educational sector--especially in Mexico where teachers have more rights than duties. In Mexico, most kids can go to school but the quality is poor because it is based on teaching, not learning. The information cycle mentioned by Horton is really affected.

Lau shared a paper that he wrote, trying to relate Information Literacy to the socio-economic development of a country. Development is not just economic; it's social and political as well. Of the three factors, the most important is social. Mexico may be good at manufacturing, but it is not good at generating intellectual capital. If Mexico were to improve education, we could generate more information and use it. In Mexico the internet is available but nobody benefits from it, because nobody knows how to use it. They have the same electronic databases as the developed world, but the students and faculty don't know how to use them because they lack information competencies.

Hassouna said there is a successful programme in Egypt sponsored by CARE International, which is similar to the programmes mentioned by Ferreiro, and which teaches women. On the political side, the women also have elected small councils--sponsored by the Programme--that run everything in the village (e.g., deciding about waste water). Also, she proposed to talk about educational programmes and how to integrate Information Literacy. The curricula, for example in Egypt, are already overloaded, and they are grade-driven. However, the privileged schools offer extracurricular activities, such as economic models, Model United Nations, Arab League, etc. A way to integrate Information Literacy could be making it a criterion of the Human Development Index, or making it subsidiary index, for Information Literacy with the criteria depending on the extracurricular activities schools have created. She worried that his might be too ambitious, but we must start somewhere in what we believe.

Breivik returned to Byrne's point that people ask their friends for information. Businesspeople do this all the time, according to the research. Unless you are well-positioned, that approach probably won't get good information for your company. The

need for Information Literacy should be spread through word of mouth in the business community. One of the target audiences we should pursue are those groups charged with assisting them. Businesses tend to hire consultants to help them and the business people are often not sure how good the information they get is.   She wondered if there is an agency that might give consultants a "good housekeeping" seal of approval.

Ferreiro offered the topic of broadband as a topic of discussion.   Countries that lack it will have fewer opportunities for education and commerce, because they won't be able to download videos for e-learning. Information literacy should go hand in hand with broadband, but there is not enough broadband available in Latin America.

Also, education by itself is not enough. High levels of corruption also prevent Information Literacy from making progress. Access to risk or venture capital is also important. Many women in Chile work in their homes; and, in one-out-of-three homes, there is handicapped person for them to care for. They need help exporting their goods through the internet using e-commerce.

Cambridge notes that everyone keeps mentioning the role of NGOs. In the US, there is disappointment in the high schools (grades 9-12) education. There are three main groups which need to be involved in improving that situation: local governments which control schools, community groups and the federal groups. She hopes for recommendations to be given to NGOs, and specific kinds of NGOs, that we think could be really central in helping with the issues of Information Literacy.

El-Kaffass mentioned there is an Egyptian National Centre for Information and Decision Support. She said that information is important for any enlightened decision making. She reiterated that Information Literacy is a tool for bridging the gaps between different cultures. For example, while surveys are formal in the US, that is not possible in the MENA region. MENA citizens would share information, but when asked for permission to record answers or a signature, they won't give any information. She also commented about the difference in consumer preferences for instructions on boxes and what might be more useful to those countries which are not fond of written detailed instructions such as pictures.

Rezkanna discussed the protection of consumers and described a programme in the Egyptian Ministry of Industry to train people on the idea of clean products.

Tovote addressed el-Kaffass's comment about cultural information, which reminded her of big Swedish companies moving part or all of their companies because of high salaries. For example, they place their call centres in other countries. She described how an old, famous Swedish toy company moved to India.

Gould said that universities and graduate schools do have small business development centres and work very closely with the business community. In the United States, it's called Town and Gown. Also, there is an organisation that works through the State Department, which takes retired, successful business people and sends them to developing countries. An organisation of retired CEO's in the States, on a volunteer

basis, does something similar. They are giving back to the community in intergenerational work.

Ferreiro mentioned legal information related to investment. The Library of Congress of Chile translates the laws and puts them on the website. She also commented on Horton's point on libraries turning into producers of information. After two years, the Library has 20 people assembled to produce information. There is a research area for the members of Parliament to receive such help. In addition, after 15 days that information becomes public on the website. People also produce information on the intranet like issues of the future (e.g., what is the impact of nanotechnology). The Library of Congress of Chile is always dealing with the past, present and the future.

She also mentioned a Brazilian group, the Centre for Democracy of Informatics, which goes to the farmer markets and teaches farmers how to use information through the internet, to see prices, etc. They don't teach informatics. Their strength is that they go to individuals at the seller-to-customer level of economics and create seeds of community empowerment there.

Horton wanted to reinforce what Ferreiro said, saying he took a survey of the role of libraries in the US government departments. Out of 340 cabinet departments and agencies, there were only ten federal libraries that proactively helped all of the programme people within that agency produce and create information for the public.

Wedgeworth returned to a point of Byrne's when he said his construct applied primarily to people who were well off. Having spent most of his career dealing with students and scientific researchers, who understand the structure in which they can seek information, Wedgeworth said it is easier to apply Information Literacy concepts to them. Now he deals with groups for which these constructs don't exist. It is hard to introduce the constructs without taking into account the contexts in which the groups operate. His company works in 56 countries and identifies several areas which have dominant influence on these people's lives. They are human rights, prolonged civil conflict, fragile ecosystems, HIV-AIDS and disaster circumstances. These special circumstances have to be dealt with before trying to apply the concepts under discussion.

Dobrev wanted to respond to Horton's suggestion to involve information producers. For business information, the main producers are not the libraries. He explicitly recommends establishing links with producers like Dunn & Bradstreet, Lexis, and other producers of information.

Breivik added a note of caution for the group going into the discussion of recommendations. She listed the common threads she saw running through the discussion: she reiterated empowering the small businesses, and their owners. One thing that only Raseroka mentioned was research. Several people talked about the importance of assessment, as Dudziak did in her presentation. Raseroka talked about home-based workers, as did Ferreiro. As we think about moving ahead in this area and making recommendations, we need to keep these in mind. How can we introduce Information Literacy to improve the quality of life for those people? There is also the

issue of collaboration – who can we partner with? Another theme is the need for strategic planning in the context of the priorities of funding agencies and of governments. The last issue was that of culture, as Wedgeworth listed.

5. Governance & Citizenship and Information Literacy
5.1 Lead Sector Expert Presentation by Mrs. Martha Gould

Gould noted that there was a lot of emphasis on technology and the internet in the discussions, but it needs noting that not everyone wants or can afford access to this technology. She reiterated that when drafting recommendations, the group needs to think of Information Literacy outside of technology because Information Literacy is not dependent on technology, as seen in the discussion on the oral tradition. She reiterated and gave examples of the possibility of intergenerational learning.

Gould also noted that there is a real risk of information overload in modern society, which she illustrated with a quote from T.S. Eliot: "Where is the wisdom we have lost to knowledge, and where is the knowledge that we have lost to information." She requested that everyone think about that when they begin to draft their recommendations.

Gould discussed change management in a technology-driven world; and the impact of Information Literacy, or lack of, in an existing public policy. She emphasized sustainability, stressing that the need for long-time learning changes in how people live and work. Public policy needs to be created in such a way that the changes are sustainable. In order to create good public policy, Gould said that people must become political entities and learn the culture of their institutions, so as to influence the powerbrokers. If we are to succeed in getting our message regarding the importance Information Literacy across to them, we must understand the politics, which takes time and effort and outreach. She reiterated that each of the participants needs to reach out to other entities in our institutions, and communities (village, county, and nation).

She stressed the need to do strategic planning. When talking about broad goals outlined in the Prague Report, she reviewed the IFLA objectives. She thinks they're wonderful but lack a clear description of the way to achieve them. Her recommendation is to reach out into your communities for input. There will always be powerbrokers and stakeholders--some of which will support you and others will fight you. Gould made additional recommendations to identify all of the stakeholders and powerbrokers, to get citizen supporters by joining groups. As a word of caution, she said we shouldn't use the term, Information Literacy when dealing with government officials, but rather use language which carries meaning for them. If you can explain how, if they follow your recommendations, positive results will be forthcoming that can be used when they want to be re-elected, you've created an advocate for your goals.

She continued with a list of recommendations, saying that it is important to know where your funding comes from (i.e., to understand the politics of the budget).   She stressed the value of listening to your communities, as listening skills are very important when negotiating about budgets.   She underscored that none of the tasks are easy, and much

is learned by experience. She emphasized developing negotiating and lobbying skills, as anyone can be an effective lobbyist if they have a passion for what they do.

She continued with her list of recommendations stating that, if you are working on an idea and discover someone else is doing it, ask them to join forces with you. She said it is as important to know who will be the ultimate beneficiaries of your efforts as it is to know what funding and resources are required. The idea is based on understanding tax issues and bonding and municipal finances. When working with legislators or agency heads, it is necessary to figure out alternative methods to accomplish the goals. The benefit is not something received, but rather something provided to their constituents.

Gould handed out an outline on strategic planning, and a handout called "The seven points of negotiation", and noted that everything that we do depends on how well we negotiate. The seven points of negotiation are:

- Best Alternative to a negotiated agreement (a fall back position)
- Interests
- Options
- Commitment
- Communication
- Legitimacy
- Relationship

Items two - seven must be addressed as elements of a good negotiation. On the handout, various positions in a negotiation are listed, an effective negotiation outcome is defined, and it explains how to give good feedback.

5.2 Regional Perspectives

Comments by members of the Governance & Citizenship team followed in order to provide regional perspectives.

Dudziak spoke about governance and citizenship noting that we need to consider the political and ethical dimensions of the individual as well as the social dimension of the individual living in society. People are social actors who act as social transformers. As such Information Literacy is more than access learning, and it is more than a cognitive activity. It is about skills, knowledge and values built upon continuous personal transformation. People's feelings and perceptions, values and relationships must be transformed. This process has to be built among people sharing experiences and meanings. For citizenship, it is important to have critical thinking, independent learning, and systematic thinking. Citizenship is more than knowing what information is necessary and how to find and select information; it includes knowing why the information is important. The mediated learning process, in Dudziak's opinion, is applicable to the Information Literacy process; librarians can be mediators between information, Information Literacy and the community. Fostering the concept in different publics is important.

Hassouna stated she is concerned about Information Literacy with regards to people's rights. She noted that the developing world has a significant problem. Rights are not denied, but often citizens are unaware of their rights, because of illiteracy, complicated texts or selective and misleading mass media. For instance, sometimes people think Islamic women have no rights, which is not true. However, the media, the government, or the ruler--advised by other men throughout history--can mix tradition and tribal mentality with religious doctrine, which influences people.

El-Kaffass reminded the group of what she said earlier that in the MENA region there is a culture of equating information with power so that holding onto information means holding onto power. This also implies that people value information, and everyone feels the importance of information. Therefore, those who get access to information, that is being held in an informal way, use it; and often people holding or accessing information use it in attacking another person--turning the information against them. This culture perpetuates itself; so there are those who have the information and hold it, and there are those who are waiting for any piece of this information to use it against the holder of the information. So it goes in a circle, and nobody knows when to intervene into the circle to cut it. This creates the issue of knowing how to encourage people to give out information without being worried about their personal and professional security.

Breivik said she was asked to clarify what should be covered in a discussion about governance and citizenship. She noted that there are two aspects. The first is how we position ourselves in dealing with politicians. She said that Gould concentrated on the state, national and local level, and that we can broaden from that to the international level. The second aspect is empowering individuals though Information Literacy to be an effective citizen.

Bin Maiden said in Singapore, they concentrated on ICT in the 80's, and the effort is for people to access information from cradle to grave. The first effort was the IT infrastructure. The IT literacy in Singapore is 74 %, which is being emulated by the neighbouring countries. Another effort is to get the broadband up and train the citizens at the NGOs, the libraries, the nonprofits and the SMEs and the religious centres. Another effort is replicating the content for citizens so they can access it via the web. He said Malaysia is planning a large-scale road show, in many languages. Oracle and Microsoft are sponsoring the software for it, and higher end systems are being provided for lower cost.

Ferreiro talked about the public good, for which she used Abid's definition as anything that should be free. She agreed Information Literacy should be a public good. However, it is not provided for free, and most people can't participate. She said that public value must be understood as a meaningful experience that someone has with a centre or a school. She also said that outcomes have to be seen as public value. It is useless for governments or organisations to spend a lot of money on service, if people don't use the system or fail to get value. She gave an example of public value coming from the Chilean internal revenue service. In 2004, Over 95 % of Chileans, filed their tax returns over the Internet.

She asked what Information Literacy programme is possible if there is no access to government information. She reiterated that the point of changing the culture of secrecy to a culture of public value is for the citizenry. She highlighted the benefits of blogging as a good way to empower citizens. Blogs are the creations of individuals--voices of citizens. Blogs are cheap even in countries that have very low advances in IT. People can easily be trained to use blogs, which will help them create new initiatives and work together collaboratively.

 She feels that as an "information person", she has a responsibility to help citizens, stating that there are two umbrellas that are very important in Information Literacy: transparency and accountability. She stressed that we must work within certain ethical constraints, which includes not interfering in another's political life.

The discussion returned to Gould who said that international is the next level. She gave the example of where she was involved in the White House Conference on Libraries. She said that Congress was oblivious to the conference, but things were implemented on the state and local levels, because the recommendations came from the White House Conference.   She recommended thinking about a world conference on Information Literacy, which should be built upon the information and issues brought out in the colloquium discussions which should have the same kind of trickle down effect to nationals as the White House conference had on the state and local settings. She ended by saying that the Western countries have a moral obligation to the developing countries.

5.3 Open Discussion

Sabaratnam mentioned how to deal with politicians. She said it is necessary to find the right champions to get the support, when making a strategic plan. Strategic plans are measured in clear outcomes and deliverables, so champions must be included in the discussions. To empower citizens, she recommends identifying the target communities that need help most. For example, indicators from the World Economic Forum can be used, and the top half could help the bottom half by initiating a training programme to raise the fluency of information technology. She stressed the importance of raising the fluency of the English language in Asia so Asian citizens can then take part in the global economy. In empowering the citizens, the core skills to be addressed must be identified, including understanding information sources and how to use them, and things like searching on the Internet. She noted the idea of low cost plans similar to the adoption programmes, which allow funding for volunteers to go out and raise literacy levels. She concluded that philanthropic efforts and NGOs should be included.

Tovote said that she agreed with Gould that the international arena makes things happen in her country. In this context of this meeting, we can really help each other. She also thinks that a World Conference on Information Literacy would have a major impact on governments. The Finns should be used as a model. She noted that in Prague one participant was a former Finnish parliamentarian, who said you have to tell stories about Information Literacy and document how much the Information Literacy efforts you are recommending will cost and what it will cost if you do not do it. She also said

that there is a need to think about the marginalized groups in Europe who have different needs than the rest of the citizens.

Ferreiro returned to the concept of the public good, saying that she provides legal information free for everyone. She also noted the difficulty for lay people in understanding legal language, which prevents them from having a good experience. This must be changed and it is important to think about how to do that.

El-Kaffass reiterated the specificities of the MENA region, where it is difficult to introduce Information Literacy in the area of governance. A paradigm shift is needed to introduce Information Literacy into the area of governance in the countries unused to democracy. The concepts of accountability, responsibility, open communication, decentralization, delegation of authority and participation are new ideas that could create turmoil between a government and its people. She said we should consider how to make this transition without chaos, which is an area where her team, and her region, needs help.

Assamoah-Hassan said that there are some basic issues in the sub-Saharan African region. The first is that public access to government information brings about an informed citizenry well equipped to participate effectively in governance. Government information is necessary to enable individuals to know their specific rights and responsibilities. It is also important to know the activities of the government in order to be able to hold it accountable. A truly democratic government must be the one that ensures the free flow of information to all its citizens to enrich their lives. Unfortunately there is a great amount of restriction of information in Africa. This is linked to the adage that information is power, so our governments tell us what they think it is important for us to know and not what is required or demanded by the people. The concept of freedom of access to information demands openness for a cultural and value change. Governments are, therefore, duty bound to make information available. The current trend is for governments to see electronic access as the ideal in e-governance, so sub-Saharan governments are aspiring to that. She noted that most governments in the sub-Saharan region are putting more emphasis on ICT infrastructure and regulatory measures, because the donor community is pushing ICT as the most important issue in the Knowledge Society. Access without skills is not useful; so the acquisition of Information Literacy skills becomes a basic need in a person's life. What really is required is Information Literacy abilities in the mother tongue, so that the people are empowered to use oral skills. Use of the mother tongue in Information Literacy is very effective in sub-Saharan Africa. She said that, regrettably, the avenues for the acquisition of Information Literacy skills to enable access and good use of government information have not been given adequate attention by most of the governments in Africa.

Assamoah-Hassan said that it is necessary to look at the problem of sociability and preservation, which means finding modes for preservation and conversation. Because governments do not have the funds to send e-information to rural areas, they resort to oralcy to ensure that the dwellers of rural and remote areas are empowered.

Assamoah-Hassan commented on several needs: (1) the lack of Information Literacy programmes in formal education curricula and community development initiatives, (2) the lack of seminars and workshops to educate policy makers to the need for policies, standards and programmes for the promotion of Information Literacy and (3) the failure to implement any of the latter. Instead, there are established systems of private or personal informal networks in government.

Another problem is that most librarians cannot provide information services; instead they stick to traditional information management. The real need is for information services, but telecentres and libraries fail to work together to provide them. She believes that librarians are the champions of Information Literacy and need to be assisted to develop an effective use of advocacy skills and to be more proactive in order to disseminate and push the demand for Information Literacy.

She mentioned a few best practices. Telecentres are used very often to provide basic information in civic responsibilities, elections and voting processes. In Ghana, there are medical press sessions at telecentres, sometimes on TV and sometimes interactive. Another best practice is the use of pictorial images, lyrics and icons, which are successful in making citizens literate in governance, especially is if a person is not bilingual. There are "phone-in" radio programmes, where citizens call in on mobile phones and express views on a topic. This includes asking government officials about issues that are important to citizens' lives. In Parliament once a year, a breakfast meeting is held, which is open to the public and where people are told about the working of Parliament. In addition to attending this, once a year the president also does a question and answer session with the public. Good practices also come from civil society organisations, which spread Information Literacy skills to support the development of the individual, good governance and poverty reduction. These are very effective at the local and even at the village level.

Wedgeworth said most of legislative and constitutionals documents are written in terms of the ideal citizen and the rights for the ideal citizen, but most of the influence on governance doesn't come from individuals but rather from organized efforts, traditionally political organisations. This is problematic because political organisations normally represent so many different interests.

He acknowledged what Gould presented, as a rich sense of what an individual can ideally do, but pointed out that because her state has such a small population, it was possible for her to have a personal relationship with a powerful individual within the U.S. government. He said that very few individuals would have a similar opportunity. He also said that a person might have that personal relationship to a source of information, which happens in all governments. For most people, their influence on governments comes from institutions. Therefore, if Information Literacy is to be applied in the area of governance and citizenship, the question becomes how to reach these organisations and institutions. He described the variety of organisations and institutions that have influence over what happens in government, including special interest organisations such as "Mothers against Drunk Drivers", which started as a local effort that grew national, to combat people operating motor vehicles under the influence

of alcohol.

Wedgeworth said that a few months earlier, President Bush proposed that funding for adult education should be reduced by 63% with a rationale that the programmes did not work. Wedgeworth and others organized adult learners, who wrote to their members of Congress. The Congress members said they received more letters on the issue than any other issue except social security. If Information Literacy is to be applied to the area of governance and citizenship, the key organisations and institutions that have an influence on our government must be located and recruited too the importance of Information Literacy. To reinforce what Ferreiro said, Wedgeworth pointed out how the Internet and blogging have been used to exert negative influence on the government. He ended by saying that these tools can grow, develop and be a more positive influence.

Cambridge stated two examples of influencing governance: one on the country itself and the other on a major religious group. In the U.S., a group called moveon.org, which organized on the Internet with just a few members, made a huge difference by tapping into the sentiment and reason of millions of people across the U.S. It also became and continues to be a fund raising influence, and is generally a major new source of influence upon the government. The second group is a large religious group with members who disagree with a particular judicial decision. Instead of fleeing the organisation, the unhappy members strategised online across the country as to what to do without ever meeting in person. She stated that blogs have the potential to create some of the action that needs to happen to generate change.

Dudziak said that in Brazil, there is a foundation linked to the Ministry of Science and Technology to support research. Since it was set up, it has always been one of the major institutions for the support of science, technology and innovation--contributing directly to the training of researchers. These are informal spaces of education located in low-income communities or in institutions that take care of people with special needs. For example, the *Net People of the Forest* is a project, created in 2003, that involves diverse traditional communities. It facilitates the exchange of positive experiences of sustainability to stimulate partnerships with the monitoring agencies of protected areas and to promote access to information technology with Internet connections. The information society will exist only if there is a corresponding culture defined beyond simply an accumulation of technologies. The problem is not lack of computers but rather the lack of information in accessible languages and the lack of mediators of information. The advances of science and technology benefit the common citizen only if there are information agents.