



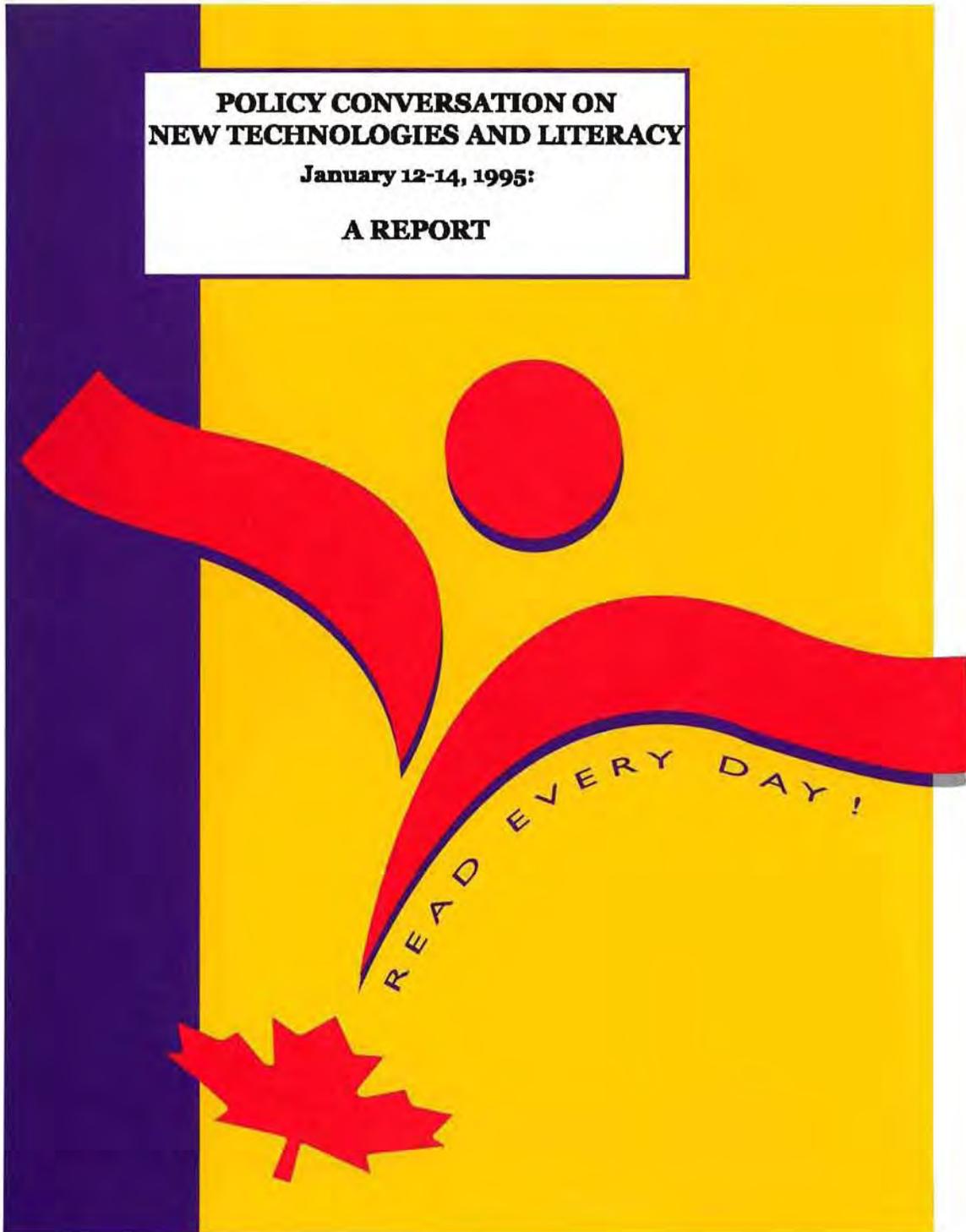
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**POLICY CONVERSATION ON
NEW TECHNOLOGIES AND LITERACY**

January 12-14, 1995:

A REPORT



*National
Literacy
Secretariat*



*Le Secrétariat
national à
l'alphabétisation*

Canada 

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NEW TECHNOLOGIES AND LITERACY**
January 12-14, 1995:
A REPORT

Published by the National Literacy Secretariat
Ottawa, Ontario K1A 1K5

To order copies of this report contact:
the National Literacy Secretariat
Ottawa, Ontario K1A 1K5
Telephone: 819-953-5280
Fax: 819-953-8076

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Government
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Human Resources
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Gouvernement
du Canada
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des ressources humaines

National Literacy
Secretariat
Ottawa, Ontario
K1A 1K5
Tel: (819) 953-5280
Fax: (819) 953-8076

Secretariat national a l'alphabetisation
Ottawa (Ontario)
K1A 1K5
Tel: (819) 953-5280
Facsimile: (819) 953-8076

June 1995

The National Literacy Secretariat is pleased to be able to provide you with this report of our Policy Conversation on New Information and Communications Technologies and Literacy, which was held in Montreal on January 12-14, 1995.

The Policy Conversation was a chance for a group of interested individuals to share with the National Literacy Secretariat their hopes and concerns, their ideas and perspectives about the role new technologies can play in promoting and developing literacy in Canada. The Policy Conversation allowed us all a chance to speak without closure and without the need to reach resolution.

This publication is a compilation of a variety of documents, some of which were available at the event, others which have been prepared to summarize and document the Policy Conversation itself. The section entitled *A Conversation about Literacy and Technology, Yesterday, Today and Tomorrow* is a guide to our conversation and to the ideas expressed at the meeting. You will find the following documents in this report:

- I National Literacy Secretariat: Policy Conversations
- II A Conversation About Literacy and Technology, Yesterday, Today and Tomorrow
- III Closing Remarks - James E. Page, Director General, National Literacy Secretariat
- IV Literacy and the New Information and Communications Technologies: A Commentary on Some Key Reports and Studies
- V Participants' Issues: Summary and Analysis of Responses to a Participant Questionnaire
- VI Participant Questionnaire
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- X Review of National Literacy Secretariat Projects
- XI New Technologies: List of Projects Funded by the NLS, 1988- 1994

We hope that you find this publication informative and useful. As we discussed at the Policy Conversation, some of the next steps must now be taken by you. We hope that you will have conversations on this topic yourself, in your own organizations and jurisdictions, and that you will inform us of the results of those conversations. We hope that our Policy Conversation, and this report, will be useful to help you to position yourself on these issues. We look forward to continuing our work in this area to strengthen the ability of Canadians to use the new technologies to their best advantage in the strengthening of literacy in this country.

Please feel free to distribute copies of this report to anyone you feel may be interested in the subject of literacy and the new technologies. We intend to make it available widely both in hard copy and electronically over NALD (National Adult Literacy Database) and Alphacom (formerly CoSy - Ontario Literacy Communications Network).

I would like to thank the following individuals and organizations for making this Policy Conversation on New Technologies such a success:

- The Centre for Literacy, especially Linda Shohet and Catherine Duncan
- Dawson College
- Carol MacLeod
- Anna Stahmer
- Joanne Godin, Words That Matter, Inc.
- Bernard Deschenes, Tran-Script Enr.
- Hotel du Fort
- StenoTran
- Nancy Brady
- The Policy Conversation participants

In closing, the National Literacy Secretariat hopes that you will find the material contained herein of value.

With best wishes for success in your working linking technologies and literacy,

Sincerely,



James E. Page
Director General

I

**National Literacy Secretariat:
POLICY CONVERSATIONS**

NATIONAL LITERACY SECRETARIAT POLICY CONVERSATIONS

INTRODUCTION

The National Literacy Secretariat (NLS) was established in 1988. Its mandate is to facilitate the involvement of all sectors of society in creating a more literate Canada. Consequently, the NLS has developed productive relationships with a large number of governmental and non-governmental organizations. The focus has been on encouraging the development of institutional, community and individual knowledge and understanding of literacy issues and concerns through various endeavours, including the provision of financial assistance.

The first of the funding streams is the **national programme** through which the NLS has provided support to a range of national organizations and to the provincial and territorial coalitions for literacy. As well, through this programme the NLS has entered into partnerships with non-literacy NGO's, business and labour organizations, and others to encourage them to relate their specific missions and mandates to the literacy challenges facing Canadians .

The kinds of projects funded have been varied. Work has been undertaken to raise public awareness, to develop various kinds of learning materials, and to stimulate research into practices, evaluation techniques and delivery methods. Support also has been provided for the Literacy Skills Used in Daily Activities (LSUDA) study done by Statistics Canada in 1989, and for the current International Adult Literacy Survey (IALS), to cite some examples.

The NLS **federal-provincial/territorial programme** is a cost-shared partnership with each provincial/territorial jurisdiction designed to address regional or local needs. Respecting jurisdictional lines, and working cooperatively in mostly informal arrangements, the two orders of government have co-supported a range of valuable literacy projects and initiatives designed to meet the diverse needs of the different literacy communities across the land.

There are five types of projects which are eligible for funding under either of the funding streams:

- the development of learning materials;
- research;
- the improvement of access and outreach;
- the improvement of coordination and information sharing;
- increasing public awareness.

The work of the **national programme** and of the **federal-provincial/territorial** stream is well known within the literacy community. Over the first years of the NLS many different projects have been pursued. Many successes have been achieved as a consequence of these partnerships.

BACKGROUND or "WHAT IS THE CURRENT NLS SITUATION?"

In 1993 a new Government was sworn into power in Ottawa. The Prime Minister, in announcing his Cabinet, designated the Leader of the Government in the Senate, Senator Joyce Fairbairn, as the Minister with Special Responsibility for Literacy. In its Throne Speech and in its first budget the Government signalled the importance it attaches to literacy. A promised restoration of funding to the NLS has been accomplished.

In addition, the Government has identified literacy as one of the themes of **The Atlantic Groundfish Strategy** (TAGS) and has earmarked \$10M over five years to the NLS for this purpose. As well, the **Literacy Corps**, formerly with Employment Branch of Human Resources Development, was transferred to the NLS.

The Government has identified a number of significant policy priorities for this Mandate. High on the list is the reform of Canada's Social Programmes. As well, there are policy activities in the areas of criminal justice and the administration of justice, in the health care field, in cultural policy and in the development and use of new information and communications technologies, most notably the "Electronic Highway".

Situated as it is now with a Minister with Special Responsibility for Literacy, refinanced programmes and additional responsibilities, the NLS is at a watershed. In addition, it is currently undergoing a regular programme evaluation which is a helpful opportunity to reflect on accomplishments to date. For these reasons it is timely to consider the future possible foci of the NLS and to re-examine how literacy issues are positioned in the development of public policy at the federal level.

WHY FOCUS ON "POLICY"?

One of the major challenges faced by the NLS is how best to situate literacy issues in the current policy debates (especially those noted above), and in the policy development processes and programme design stages which will inevitably follow. Consequently during the "conversations" we want to focus on "policy", (that is on approaches, tactics, systems and frameworks,) rather than on programme delivery, or technique, or individual projects, or on methodology. Greater focus on those will follow later.

Obviously, policy is not made in a vacuum, free of the considerations of impact, public interest, priority and choice. If one looks at the fundamental questions the Government is asking about the future of an array of social and cultural programmes, there is a unique opportunity to advance the literacy agenda.

So, we are looking for wisdom, prudent consideration of potential ways to advance literacy issues, and an opportunity to think strategically and astutely about how best to proceed on a range of important, related fronts.

WHY POLICY "CONVERSATIONS"?

One of the lessons of the NLS's existence since 1988 has been the importance of partnerships and of close attention to community interests and needs. The NLS has a tradition of consulting closely with the community and with other stakeholders.

To further this process, the NLS has decided to develop a its own model: The Policy Conversation. As noted, the NLS has supported an array of different kinds of initiatives. This has been important to the field because it has allowed for experimentation, risk-taking and creativity. Key to the NLS is that this spirit be sustained.

WHY IS THE NLS TAKING THIS APPROACH?

There are a number of reasons for this initiative.

- Public policy connections between literacy and the various priority areas of government are crucial to the future of literacy support at the federal level and critical to the continued effectiveness of the NLS.
- Due to the visibility given this issue by the Government, there is need to take stock of what has been accomplished and to measure where we are at present. This leads naturally to consideration of how literacy might most appropriately develop, and how the NLS should position itself to assist the field, over the medium to long term.
- There is a need for focused discussion about a range of key literacy issues/themes. The notion of a policy conversation on a specific topic or theme is intended to advance thinking about the possible future development of literacy issues in the chosen theme areas.
- The first of the policy, conversations should link to several of the broad themes of significance to the government's agenda but also to the current interests of the field generally.

Based on these considerations the NLS will organize two policy conversations during January, 1995. The topics have been chosen because of the Government's interest in social security review and the future of technology:

- **Literacy and New Information and Communications Technologies; and**
- **Workplace/Work Force Literacy.**

HOW WILL THESE POLICY CONVERSATIONS BE STRUCTURED?

[The following are our thoughts about this process at the time of writing this document. But our thinking is evolving and we welcome any comments or suggestions on what follows. That is not to imply that we will take every comment made into account. That may not be possible.]

Each Conversation will begin with a presentation on the purpose of the event. We will also prepare some documents to help stimulate thinking in advance of the meeting.

This will include, when appropriate, a prepared "think piece", presented by the author, to set the context for the discussion. In other instances we may commission a "literature review" as the introductory document. In all cases, in advance of the meeting, we will survey those who have agreed to participate in order to elicit some of their early thinking about the issue at hand. Their comments will be written-up in a synthesis document for distribution before the meeting with either a copy of the think piece or the literature review.

After the introductory session, each Conversation will have three discrete parts: The Past Tense; The Present Tense; and the Future Tense. The Past Tense will provide time for participants to discuss developments in the topic or theme to date. The Present Tense suggests an opportunity to take stock of where the field is at present. The Future Tense, obviously the heart of the exercise, will provide an opportunity for participants to discuss the future and to suggest how they think that organizations, including the NLS, might position themselves to advance work in the chosen theme area.

Each of these "Tenses" will be approached by use of an "informal conversation", or ice-breaker. We expect about twenty participants for each event, and this group will be subdivided into sub-groups of five persons each for these informal sessions. The purpose is to provide people with an opportunity to get to know one another and to be able to speak freely in a small and unstructured setting. Then the "informal conversation" will be followed by a "formal conversation", or plenary session, which will involve all twenty participants. There will be simultaneous interpretation available for the plenary sessions. ' .

WHAT ARE THE ANTICIPATED RESULTS OF THESE POLICY CONVERSATIONS?

First and foremost, the Conversations are to stimulate thinking, to expand knowledge of past and present circumstances, and to canvass future possibilities. We hope that people will come to them with a willingness to "check their affiliations at the door" in order to be able to participate in free-ranging and unconstrained thinking about the literacy issue in question.

We hope that each individual will be enriched by participating in this process, and we hope that each participant will take back insights for their own consideration and potential action.

We are looking for "intelligence" on the issues in question and will take away from each Conversation the knowledge and information gleaned as part of a wider process of consultation and thinking about future possible orientations for the NLS.

We are not looking for consensus, and will not ask for recommendations of future policies or programmes of the NLS. This is not a decision-making session, nor is it an advisory body in any formal sense. This is but one way, among others, for the NLS to canvass opinion and to explore policy options.

The results of each policy conversation will be valuable to our ongoing policy work. A brief summary document on the Conversation will be prepared and made available in both print and electronic forms to anyone who might wish to have them.

II

**A CONVERSATION ABOUT LITERACY AND TECHNOLOGY:
YESTERDAY, TODAY AND TOMORROW**

January 12-14, 1995

**A Report prepared for the National Literacy Secretariat
by
Words That Matter Inc.
Joanne Godin**

'One of our goals in holding this policy conversation is to obtain information and your opinions about whether or not a policy or strategy on literacy and technology is needed and if it is, what some of its components might be. We're looking for ideas; for a sense of what is possible and appropriate as a broader process of information gathering and policy formulation.

Our past tense conversation will give us an opportunity to review developments to date. Our present tense conversation is an opportunity to reflect on where we are and the key questions we face. Our future tense conversation will give us an opportunity to suggest how Canada might position itself to advance literacy using new technology and related techniques.'

-James E. Page
Director General
National Literacy Secretariat

On software and training ...

In the past, learners have asked to use computers and the practitioners were not comfortable with that. The matching did not work out because we didn't take into consideration whether the tutor was comfortable with the equipment or a computer.

We need to know whether and how various software works. And we need to place a priority on the time and resources needed for technology training.

We have seen software companies moving in without any consultation, saying 'we're going to give you "X" number of dollars worth of goods' without your being able to look at it and of course, they had nothing in mind other than they'd be able to add your program's name to their list of users. It was being done for promotional purposes. There are people out there who are very powerful marketers and there's very little consultation-the people who have the money to make the purchases are often approached directly by the person marketing a product. They make promises of magical outcomes-re-educating our workforce in six months, for example.

Today, one of the substantial barriers to the introduction of new technologies is the small number of learners and the fact that the software companies don't see the market. The market itself doesn't realize that it is one so it doesn't position itself or always embrace the technology as something useful.

It is difficult to set up a major software lending library, to give people access to software trials, because of copyright and security issues. Where we see demonstration centres set up, they often require people to travel quite a distance. Whether we do these demonstrations online or in person, they are important.

I have yet to find a student who did not want to get on to a computer. However, once they get on, if the material on it is poor, they get off quickly. It's the software. You can have a television, but if the programs are poor, are you going to watch it? It's very important that we think about what's *on* the technology, because that's what motivates our decision to use it or not.

Practitioners in community-based programs are busy trying to keep their programs going, so it is very hard for them to think about new technology or new anything.

Training for practitioners and literacy learners takes time and in most situations where people need the training to work with the technology, they are not given adequate time.

In the future, what we need is a filter to make sure that there's a process for a company to go through before it can approach an organization with a deal that looks wonderful but that has not been properly screened. If software companies make big claims, they should put the technology on site for a period of time so we can evaluate the program.

When money is given for technology projects, it would be a good idea to include a provision for user training instead of deferring training until later.

- We must develop those volunteers and teachers who are most interested in a given subject, so that they can train others.

On networks...

By now, in Quebec, about 10,000 people are connected to the school network; which acts as a bridge to the Internet.

- In each region in Quebec, we have resource people who help us gain access to the networks and useful information.
- In Ontario, we don't know how many people are on the Internet, the Access Network and others, and are comfortable using them. Ontario colleges are, in theory, all hooked up to the Internet, but most do not have user IDs available for all faculty. Some people in community-based programs gain access to the Internet through their spouses. There is a whole variety of things that people in the field need access to, and the problem in Ontario is that more often the administrator has access to the Internet, not the front-line teachers.
- We have a Free-net in Victoria, through which you can get into the Internet, but the problem is that you can't get access to it. It's always busy and the whole system broke down a few months ago.

Today, there are two disincentives to using the Internet: the Internet does not speak French and therefore has no accents, so we have to write in capital letters-from a

pedagogical perspective, that's not very helpful; and when people plug into the Internet, they are completely lost.

We have to develop more network access, better network systems, and a realistic perspective on how users can benefit from this technology.

- We didn't connect by Internet around this conference. We are using paper and pencils, flip charts. We have chosen not to use this technology. The gap between that and the vision of putting learners on the Internet is too big. I have been on Internet for over a year; I still have trouble getting what I want when I want it.

In the future, we need an overall network or a backbone for a network.

- The Canadian Council of Ministers of Education, the principals and presidents of all the community colleges, the university presidents and governments should provide direct dial-up access for people in all community literacy programs and community college programs.
- For the short run it is probably unrealistic to think of connecting Ontario's 60,000 learners on Internet, but it is realistic to think of connecting the practitioners.
- People in literacy centres must learn how to get what they need and to process the information.
- People should be able to participate in this kind of discussion online. It is inevitable that most of us will have access-maybe not Cadillac access but Volkswagen access-to electronic communication in a year or two.

My vision would be community storefront learning centres where practitioners would be able to link up with everybody they wanted and have ongoing professional development and training. We need to establish expert advice services, giving literacy practitioners access to somebody who has some expertise in, for example, learning disabilities. In this way, the practitioner can talk about something in the classroom and get some expert advice.

We must recognize that a network is only a kind of communications expressway. What we need are ideas to put on it-if you build an expressway, you also need cars to travel on it. The network will evolve incredibly, but we must not run behind it. We have to create applications for it, so that the banks will not be the only users.

- We have found, even using the CoSy system, which isn't that difficult, that unless there is a reason to use it, you're not going to get on it. I can pick up a telephone. I live in a big city and I can call anybody, but if there is something on the CoSy that I *want*, on the Digest, for example, I get on it. Learners use it the same way.

Today, there is a risk in saying that PCs are not useful. They are useful for certain groups of people in certain circumstances - in companies, for example. In other cases, it is television that may be more helpful.

The best hardware may be that which is most accessible.

- The majority of people that Laubach works with are located in remote and isolated situations and don't have access to computers and technology. They do have VCRs, televisions and telephones, however, and the majority have learned about contemporary issues in society through television

Interactive television is aimed at many people, but it is expensive-\$30 a month at the moment. It requires fairly sophisticated equipment, so developing applications for it takes at least at few hundred thousand dollars.

In the 'future, we will have to try and develop the most democratic technological means. PCs may become more democratic over the next ten years, but interactive television will become even more democratic: there is no guarantee that everyone will go everywhere with a portable computer, but interactive television will be present almost everywhere. There will be a way to use this technological tool as an accessory in literacy groups and in school boards. We should also consider the accessibility of government and private sector services for people who are illiterate. In this way, interactive television will become very relevant.

On technology and learning ...

The past has shown us that there is no need to know the technology of a learning tool. That technology is only there to help the learner in the learning process. We have to make the technology speak in the learner's language and concepts rather than bring the learner to the technological concepts.

In the United States over the past ten years there was great hope that computers were going to help democratize learning and that deprived students were going to be brought into the mainstream and given opportunities they had never had before. They have found, however, that when technology is used in very deprived areas, it has been used for old purposes. They've taken old drill and skill and kept people on very focused exercises. Nothing new or imaginative has been done and nobody has asked what this technology can do to open up new vistas and new possibilities for these students. When technology has been put into upper-middle-class schools, kids have been given more open access and more creative opportunities. The same thing may go on in literacy: we take old drill and skill from workbooks and we transfer them onto computers and say that now that people are using computers, they're learning keyboarding and other transferable skills, so the program is adequate.

Today, we know that technology, literacy training and learner needs are symbiotic, affecting each other and moving along, sometimes together and sometimes at different paces. Just as the learner's needs should affect how you use technology, technology itself will have some effect on the learner. For example, the sites of learning no longer necessarily have to be in the tutor's home or the learner's home. Learning can take place anywhere because the technology allows that. The role of teachers and tutors has also changed because of the technology. We have much less of an idea of somebody standing in front of a classroom teaching, as opposed to people learning.

We have to let technology inform the learning process and make sure that it responds to the needs and strengths of the learner and the process.

Technology can be self-sufficient: the manuals provide for self-training and one can learn by oneself whenever one wishes. The learner may have access to a tutor at certain times, but this does not necessitate leaving one's home-it can be done by telephone, by fax machine, by electronic mail or similar means. A group does not have to be connected at the same time.

- Learning takes place in a relationship environment. Technology is never going to replace people. The relationship built up with somebody, and the motivation that flows from it, are important.

On research...

Up to now, there has been some research and development. We should have an on-line inventory of research to date.

- Somewhere in this inventory of research we need to look at some of the actual uses, audiences and purposes of the technology and how we can make more intelligent use of what's out there.

Today, there is a concern that we may get a lot of research from the United States, but that there's not a lot of rigor in what has happened here in Canada. We need to create opportunities for researchers and practitioners to come together; there is a sense of repeating research or of doing things over again or in isolation.

In the future, as we try to serve the entire population, we will discover that there are significant variations in needs. If we base our actions on a few experiments, we may find that we are mistaken and are going in the wrong direction. It is better to take small steps towards something

The literacy community cannot leave research to others. It must be a part of the process and involve other partners

over which we have greater control—a simpler technology that can be modified or adapted later, or partnership with private firms or research companies in the same field, to meet needs specific to them.

- People in literacy training must take part in research. If we run after technology, we will find ourselves left behind. We need to get involved at the outset, because who can tell what will happen five years from now? If we do not get involved in research, there will not be much technological advancement in literacy training. We will have extraordinary training aids but they may not meet our needs.
- For learners who cannot learn in the regular system, we could start doing some research on how they learn, what they want to learn, and how the technology can meet their needs—using television, for example.

On partnerships ...

Today, there must be a strong will, on the part of tutors and others, to allow computer projects to emerge, because building these projects is a frustrating process: we know something is not working, we have to 'debug,' we have to work three times harder than normal. So we have a tendency to return to the old ways that worked well in the past. The development of technology requires three times as much effort, so the field must be given resources and be supported through partnerships with schools, universities and firms.

The literacy community cannot do it all on its own. For resources and complementary expertise, it must build careful partnerships with academe, with governments, and with industry.

In the future, research on the use of technology in a literacy context must involve universities, business and government. A great deal of emphasis has been placed on linkages with business, but business is geared to marketing and sales, not to using the technology. The need we are talking about is individuals' need to manipulate language, using it not just to express themselves but also to reason; people who do not have sufficient language skills to reason in science and other areas are terribly handicapped.

Most of the projects that are carried out in colleges and universities are done by students at the doctoral level. It would be in the best interest of literacy organizations to link up with universities.

Adult programs need a much better partnership with the school system if family literacy is going to be more than a marginal affair affecting very few people.

- We need to talk to elementary school teachers and early childhood educators and others with an interest in education.

On workers and basic skills...

It is easier to teach a low-skill worker how to program a machine tool than to teach a computer specialist. Whether or not a lathe is programmed, one must have an intuition about how to make it work, and the workers have it. If you tell workers you are going to give them a computer programming course, you will lose them completely. If you have computer programmers work with the tool, they will not do well because what is important is the contact with metal on a lathe. If we could teach workers how to program a lathe, giving them the specifications in familiar language, they could program the machine.

Hydro Quebec has temporary workers in customer services; these workers change jobs often. When they come to a new job, shortcomings sometimes show up, in linguistic skills, in arithmetic, or in the basic physics of electricity, because they have to explain hydro bills. For them, these are basic skills, basic cognitive abilities they need to operate in certain jobs. This type of situation is found in all large corporations, so there is a market there.

In a big telephone company or a big power utility, we realize that there is a need in numeracy, but we have a large turnover in staff. For us it is a better investment to build our work process so people don't need the skills; the work process helps us to do it.

- That's not 'deskilling.' It does not mean that people will no longer have to count or read. On the contrary, they are trying to incorporate into the working environment learning modules that will enable them when they are working and enrich their knowledge base. It's not a question of replacing their knowledge.

If people could have a program tailored to address their specific skill gaps, so that they can learn to do a new job or task, there would be an enormous market for that.

- There is some potential to develop the market of private companies, looking for basic skills training, that could use technology.

On how we think about literacy...

In the past, literacy was viewed as being something that would allow people to read the great classics, to read 'Anna Karenina.' Now there is a recognition that it is to help people function in society, whether it's to read that sign or to fill out a form or to read 'Anna Karenina' but to give them a choice.

We need to redefine literacy to incorporate notions of lifelong learning and to respond to the practical realities of how technology will affect individuals' needs for basic skills.

Today, people perceive the term 'illiterate' as referring to perhaps five percent of the population, so the word may be a little misleading. This may be blocking funds and programs. The notion of illiteracy needs to be broadened so that people understand how literacy training can have a wide impact.

We need to address the importance of 'cognitive educability'-is it possible to learn to learn?

- With respect to the achievement of intellectual potential, I refer to the cognitive or meta-cognitive dimension that makes it possible to choose. Pierre Odis's model lists about 94 types of problem resolutions, such as comparison: what is similar and what is not similar?
- In literacy training, we should talk about cognitive tools that are available for reasoning, such as mathematical language, analogy, and so on-these things help us to reason and to explain other knowledge.
- Literacy is about participation. One can think about technology as providing freedom or of inducing dependence. That's the danger in thinking of technology as something that will replace intrinsic human skills-the ability to communicate and the ability to think.
- The use of language is more than simply an interface with machines.

If you think about literacy as being a number of ways to infer meaning, then in fact we're talking about different ways of making meaning accessible to people besides text-based means.

- Looking at signs and icons and visual images may not be a lower level skill. It might be a very high level skill that needs a different kind of teaching and training; we may have to expand our notion of literacy to take that into account-literacy is not just a question of words on a page.
- You may already know how to read and write and your learning level may be to learn to use technology.

In the future, to have thinking skills or information-seeking skills will I still need to do math, percentage calculations and reading or will there be a technology that can help me? Can I have thinking and information seeking and these other skills without having reading, writing, math and so forth?

- How much longer do we need reading skills and math skills? I just used the telephone the other day in the car; I say, 'Call home,' and the thing calls home. There are a lot of other tools out on the market now that do these things.
- People in the business community and the information-technology industry ask why we will need basic skills education because the technology will give us artificial intelligence and expert systems and users will only have to learn to use a mouse and understand an icon.

On policy choices...

Today, we ask whether there are times when a top-down decision will move us ahead, when we can make some assumptions about the value of doing certain things in a given environment. In New Brunswick, for example, the Premier decided that everybody graduating from a public school, community college or University by 1996 will be computer literate. That decision was made from the top and implemented down through the system.

If we really are a culture committed to lifelong learning, then literacy should play a central role in government policies on science and technology, training ...

There are policy reviews going on in the area of health, the area of law, social security review and all the rest of it. How do we position literacy in all of those areas because it is such a fundamental and cross-cutting issue that it needs to be taken into account?

Are we a culture that is committed to learning? If not, why not? If not, should we be? If we are to be, how do we get there? If the answers to all of those things are in the positive, then literacy obviously plays an extraordinarily central role.

In the future, influencing the policies of government departments that have substantial clout, such as Human Resources Development Canada, getting them to glance at literacy will do more to promote its long-term advocacy in this country than we could ever do project by project by project.

- We spoke of institutionalizing it into our country's training policy.
- Somebody raised the notion of integrating it into Science and Technology. If we begin to identify the needs on a wider scale, people will come to understand the scope of the need.

It will be essential to recognize that technology is a tool to be used for human learning ends, for our own needs, rather than as an end in itself, because it is easy to become its captive. Learner needs must be central to whatever we do in the future, along with equity of access and opportunity.

- Literacy training must not be subservient to the needs of technology or used to justify technology; technology must be adapted to the needs of literacy training.

Within five or ten years, literacy programs will have a far greater emphasis on the prevention of illiteracy than they have now. They probably will still be doing remediation activities for adults, but they will have a strong emphasis on prevention.

It's obvious that this technological society can become dangerous. There is an ethical problem of objectives, for example. It may be economical to put learners in front of a television set and use machines to test them automatically. That's what's being done with cars: People will not even have to understand how the engine works to repair a car. They will have an intelligent system that they will plug in. They will not even need to know left from right because if they turn left, the machine will tell them to turn right. This could lead to a generation of intellectual weaklings. It is a societal choice.

'The principle that I take from our conversation is that we have to get on with this. We have to act. It's important to reflect, and that's what this has been about. It has been about thinking, it has been about reflection. We need that.'

-James E. Page

III

CLOSING REMARKS:

POLICY CONVERSATION ON NEW TECHNOLOGIES AND LITERACY

**James E. Page,
Director General
National Literacy Secretariat**

CLOSING REMARKS

POLICY CONVERSATION ON NEW TECHNOLOGIES AND LITERACY

**JAMES E. PAGE
DIRECTOR GENERAL
NATIONAL LITERACY SECRETARIAT**

NO SUMMARY IS ADEQUATE ...

It is a bit daunting to make a final comment after what has been a very rich and extensive discussion. No summary would be adequate in capturing the variety of ideas and opinions expressed around our Conversation table. Perhaps the best start is simply to reiterate our purpose for convening a meeting of this kind, and to reflect on what we can draw from the ideas expressed and the experiences shared over the last three days. I must say straight away that, from my perspective, this Policy Conversation on Technologies and Literacy has been quite successful.

By arranging this meeting the National Literacy Secretariat (NLS) wanted to provide an opportunity for people to come together to think, free of constraints, about a set of issues that are very important to the future of literacy in this country. We felt a need to reflect on where we've been and where we are, and about where we might want to go.

We asked where the literacy field might be five years out and ten years out in its use of new technological tools. The notion of either five years or ten years really is, in a sense, a kind of artifice. The purpose of this future scanning is simply to think together about how the implications of technological change for literacy might evolve in the years ahead.

Part of what we have begun over these few days will become, hopefully, a continuing conversation about literacy and technology with our colleagues, within our organizations, and with the constituencies we serve. We must always be aware of the evolving nature of our work, of our strengths and weaknesses, our problems and prospects.

All of us are partners in this. We are allies in it too. We will be well served if we can encourage as many people as possible to provide us their experiences and their perceptions, their intelligence, if you like, on the literacy and technology issues at hand.

Inevitably at meetings of this kind there are concerns about what the concrete result will be from a sharing of views. This Conversation is no exception. You wonder if the NLS will change its funding policies or alter its support to any work currently being funded. We were very clear going into this exercise, both in the paper that I circulated and in the comments I made at the very beginning of this Conversation, that this is not the purpose of our deliberations. I must reiterate that we are not here to identify what we will or will not fund. I think that it would be unfair to pull together only 20 people from around the country to make decisions so fundamental to our work without a broader consultation.

SOME PRINCIPLES HAVE EMERGED...

Instead, what I take away from this gathering is a set of principles that should inform our thinking and hopefully be part of not only further conversations, but the development of future policy options and policy ideas. If that is the case we will, of course, consult more broadly than this with the field of literacy in Canada. But let me run through some of these principles.

Learner Needs...

The first amongst them is the centrality of learner needs. This principle must be taken into account and must be kept first and foremost in mind whatever we do in a policy sense. Learner needs are inextricably linked as well to equity of access and opportunity.

Practitioners and Technology...

It is also important for us to focus on the interface between practitioners and technology. We must ensure that practitioners have the kind of training, the types of material support, and the kind of research into best methods they need to come to grips with the possibilities which diverse existing and emerging technologies present.

Technology is simply a tool...

Another essential principle is the recognition that technology is simply a tool to be used for human learning ends, for our own needs, as we mentioned this morning, rather than as an end in itself. In my own experience, and I have had a lot of experience working in this area in a number of different guises, it's so very easy to become a captive of the technology, fascinated by the elegance of the machines and the creative software that accompanies a given platform.

Commentators talk about the new invisible hand of technology shaping late 20th century societies, an updating of Adam Smith's invisible hand of the market at the beginning of the industrial revolution. The new technological invisible hand, reportedly shaping our lives, influences learning and culture.

Anyone with children knows how pervasive and powerful computers and television are in shaping language, imagery and cultural values. I don't necessarily accept that notion of an all-powerful external technological force, but I think it's up to us to determine how we use these things for our own ends.

Nevertheless, the fascination is there and we must guard against being driven by the technology rather than using it for our own purposes.

... but there is a range of tools

In considering the implications of technology for literacy there is a need to recognize the range of technological instruments available to us. We should not simply become fascinated by the so-called new technologies" that are currently in the public eye. I suggest look to distance learning. There are all sorts of creative uses of very common, even ubiquitous, technologies employed by distance educators, and we in the literacy field should not forget that.

Traditional ways of doing things that are important and valuable and need not be rejected in favour of the new. There are "traditional technologies" in the process of being transformed to present us with possibilities we might not have imagined even a few short months ago. The telephone and the television are being reinvented. The key is that we use whatever tools we choose appropriately. That, too, needs to be an important principle in our thinking.

We must invest wisely...

Another point I glean from this Conversation is the need to invest wisely, not to waste scarce resources, not to chase phantom solutions to our real problems but to think through very carefully what it is we want and need. The value of reflecting on best practice in identifying how to use technology and techniques wisely as a guide to the kind of investments that we make, is another essential point. The importance of research as one of the guides to identifying needs, opportunities, best practice, and again the selection of appropriate technologies cannot be undervalued.

Training is a key element...

Training is a key element in the successful use of technology. Comments were made that perhaps projects which the NLS supports in the future should have a training element in them. You suggest we ensure this either in terms of the way we elicit proposals or in terms of our requirement for funding of proposals. That is something we should consider, and we will.

Literacy is a spectrum of diverse needs ...

Another central point made over these few days is the importance of thinking about literacy in broad terms, as a spectrum of needs and abilities, as more than purely reading and writing, to encompass thinking skills, problem-solving, and communications abilities.

The need to link literacy to a range of other related areas of public policy is another basic element to be considered in the future of policy making in this field. In addition to the policy areas we have discussed there are challenges in terms of social, cultural and citizenship policies, in terms of health care, in areas like the administration of justice and in penal reform. In fact the Secretariat is working with the National Associations Active In Criminal Justice on an array of issues, and with the Canadian Public Health Association, to cite but a few.

Stable funding is important...

The importance of recognizing that the effective use of technology for literacy purposes is linked to stable funding of literacy organizations and projects is another principle which has clearly been articulated at this meeting. I carry away the view that we must ensure it's another part of the future thinking of the NLS.

"Learning to learn" and a "Culture of Learning"...

Linking literacy to "learning to learn" is also crucial. Literacy must be linked to life-long learning and to the creation in Canada of a culture of learning. One of the things that is a fundamental challenge for this country is the future of its "learning culture" base. Are we a society with a culture that is committed to learning? If not, why not? If not, should we be? If we are to be, how do we get there? If the answers to all of those things are in the positive, then literacy obviously must play an extraordinarily central role.

Let's get on with it...

Finally, the "last" principle that I take from this Policy Conversation is that the literacy community has to get on with this. It's important to reflect. It is wise to think things through. But now is the time to make choices. Now is the time to act

As a public servant in the hurly-burly of everyday work I seldom get an opportunity to sit and to think it through. And I want to thank you all for joining with me in doing just that. More importantly, perhaps, is the hope that this meeting, by identifying the principles I have just reviewed, will be something you will use in your own work, in whatever organization, whatever you do, now and in the future.

INTELLECTUAL REFRESHMENT AND NOURISHMENT ...

This Policy Conversation has provided me and my NLS colleagues with intellectual refreshment and nourishment. As I said in the paper I circulated prior to this meeting, that's what I wanted from this, and thanks to you that's exactly what I've gotten.

I think this Policy Conversation will help me at this particular juncture in the life of the NLS. It has provided principles upon which to position ourselves effectively to work with you, all of you around this table, on issues related to technology and literacy. I say that because, as I indicated in response to someone's question yesterday, and as I indicated in the paper that I circulated prior to this meeting, literacy is a government priority at the moment and the National Literacy Secretariat is at a watershed.

WHAT ARE THE NEXT STEPS ...?

For the Secretariat the interface between the technologies and literacy is only one of the questions that we have to explore. Next, we will be meeting in Toronto at ABC Canada to talk about workplace/workforce literacy. As well, I have asked someone to prepare a kind of background paper on the possibility of a Policy Conversation on the theme "Literacy and Research", perhaps in the 'Spring. In summary there are a number of policy areas we want to look at and think about carefully before we start crafting recommendations for change.

But remember the question I asked when I made my introductory remarks? What I'm looking for is an answer to the fundamental question "Do we need a policy?" and if so, of course, "what might some of the principles of that policy be?" I will be asking that same question next week when we consider Workplace and workforce literacy issues, and later when we talk about research. These questions are important.

I conclude from your comments that we do need to develop a set of policies related to literacy and technology. The kinds of principles which I have just summarized are your suggestions as to some of the pillars upon which a policy ought to be built.

SOME FINAL WORDS ...

So we are at the beginning of a process. I hope it will not be a long and complicated one. We do not have time for that. You have my commitment that we will consult again and that we welcome any additional comments you might wish to offer.

Some next steps must be taken by you, too. We hope you will have conversations on this set of topics yourselves, in your own organisations and jurisdictions, and that you will feed the results of those in to us as well. Most importantly, and as I said at the beginning of this meeting, we hope that you and your organizations will use what you have learned here to position yourselves on these issues. We are partners and allies, the NLS cannot move on its own.

As well it is my intention to take this set of issues to the meeting with provincial literacy coordinators in the late spring -- they are usually held in June -- just to see where we think governments, be they federal, provincial or territorial, ought to position themselves both individually and collectively on these issues.

...AND THANKS

To repeat, this has not been an NLS event. It has been your event. But it has been enormously helpful to the NLS and, again, I thank you for that.

Thank you to everyone present here for your contributions to this Conversation. I want to thank in particular Linda Shohet and the Centre for hosting us and for making the arrangements for meeting rooms, lunches, and a myriad other details all of which contributed to a smoothly-run meeting.

In particular three members of my own staff, Brigid Hayes, Marla Waltman Daschko and Adrian Papanek deserve recognition for the work they did in pulling this together. The valuable contribution that Louise Guertin, so early in her time with the NLS, has made to my thinking about the structure of this meeting needs to be noted aswell.

The translators, who I understand have been enjoying Acid Rock this morning on their headphones, as well as having to cope with the stream of consciousness you have just heard, have served us admirably over these few days. Thank you.

Finally I want to thank Anna Stahmer for her contribution to this meeting both through the pre-Conversation survey and her many contributions to this exchange of ideas. I especially want to thank Carol MacLeod, because she has guided us through our programme over the last couple of days most capably. It's because of her skill and the deft touch that she has, that this has been a very stimulating, open and informative Conversation.

Thank you all very much, and safe journeys home.

IV

**LITERACY AND THE NEW INFORMATION AND
COMMUNICATIONS TECHNOLOGIES:**

A Commentary on Some Key Reports and Studies

**Joanne Godin,
Words that Matter Inc.**

Literacy and the New Information and Communications Technologies

*A Commentary on Some Key Reports and Studies,
by Joanne Godin, Words That Matter Inc.*

*"The key is to understand the technology and its role in the learning process.
Technology must be managed; it cannot be the learning system."*

New information and communications technologies are changing learning and work patterns in Canada. The Information Age is creating a learning society in which individuals need enabling skills to gain access to work opportunities and to benefit from available electronic information sources.

The National Literacy Secretariat commissioned this brief commentary on recent literature on the use of technologies in literacy training, adult basic education and other educational environments, to advance discussion in its Policy Conversation on New Technologies with representatives of the literacy, training and technology communities in January, 1995. This paper does not represent the policy of the National Literacy Secretariat (NLS) on technology and literacy, but is designed to stimulate thinking on the subject between representatives of the NLS and its partners.

Technology and Literacy Training

While hardware such as computers, CD-ROMs and audio- and video-cassette players, and media such as tele-conferencing, E-mail, electronic bulletin boards, cable access and computer networks, are becoming ubiquitous in offices, research centres, factories and homes, they are not as widely available and used in training establishments, particularly those serving adult learners upgrading their basic skills. Some learning centres are unable to gain access to new technological resources, or improve existing systems, because of cost or other barriers. Others eschew the technologies, instead favouring a low-tech training approach based on one-on-one tutor/learner interaction. Where new technologies are available for literacy training and other adult education needs, they are often unsuited to the task or are not used to their best advantage: many establishments are coping with software that does not quite meet their needs and with outdated hardware placed in environments and learning contexts that limit its usefulness.

The National Literacy Secretariat has posed the question of how it can advance work in the area of literacy and the new information and communications technologies. A brief review of the recent literature has raised a number of related questions:

- What are the emerging needs in literacy training? How can the new technologies respond to these needs?
- Is there a need to make the use of technologies more widespread in literacy training? What is their optimum use in this field?
- How can literacy providers, educators, employers, software and hardware designers, and others interested in the issues of technology and literacy training, work together to improve the use of technologies in literacy training?
- What role can a government body such as the National Literacy Secretariat play in advancing the use of technologies in literacy training?

To help answer these questions, this review highlights the findings of some recent research in the following areas:

- Learners' needs in literacy training
- The benefits and drawbacks of various technologies in literacy training
- Trainers' needs and concerns regarding technology
- Training the trainers in technology-based instruction
- Creating a learning environment that supports technology

Learners' Needs in Literacy Training

Literacy trainers and researchers have found that computer-based training programs-sometimes called "Integrated Learning Systems" (ILSs)-cannot meet all of the needs of all learners at all levels. Generally, comprehensive computer-based systems are considered most useful for learners in more advanced training programs. At this level, learners can become comfortable with the technology and with the concept of independent study. The computer program allows the learner to advance at an appropriate pace and to maintain privacy while correcting mistakes or redoing lessons. At the same time, the technology allows the instructor to monitor the student's progress and complement the computer program with other training techniques.

Instructors teaching basic skills need evaluations of the use and effectiveness of software programs so that they can evaluate the desirability of including these in training programs.

Computers and basic literacy training

Few comprehensive computer-based training programs are geared to helping the learner acquire basic literacy skills. The PALS program, which focuses on this basic learning level, is considered an effective program. None the less, it is not widely used, according to a study by Thomas and Buck of the use of ILSs in Adult Basic Education programs in British Columbia. They found so few programs using this package that they had to exclude it from their analysis.

Sylvestre and Lewis, in a study of computer-assisted learning systems used in the Yukon Territory, found that these systems were not being used to teach basic literacy. Instead of a comprehensive computer-based program, some researchers have found that more limited computer-based instruction, using software such as *Word Attack*, often serves as a complement to traditional instruction methods. Similarly, Dunkel has found that "computer applications seem most effective in the area of word analysis skills such as phonics, followed by higher level reading and language skills." Stahmer indicates that computer-based systems support drill and practice, and Romiszowski states that these systems can improve the speed with which learning takes place. Instructors teaching basic skills need evaluations of the use and effectiveness of limited software programs so that they can evaluate the desirability of including these in training programs.

Access to training opportunities

Technology can improve access to training for learners who are unable to travel to learning centres because of a disability, because of family responsibilities, or because of sheer distance. For learners with disabilities, computer-based systems can assist by making visual information audible and by improving the individual's ability to respond. Learners unable to spend long periods away from home and those distant from learning centres can benefit from distance learning opportunities that link them to instructors and other students through modems and networks. These communications technologies can also link learners to literacy centres, academic and other counsellors, and administrators in learning institutions.

Researchers have found that learners exposed to computer-based learning programs often express more appreciation for having gained access to the technology than for the content of the learning experience. The Office of Technology Assessment of the U.S. Congress found that adults respond well to opportunities to learn on computer-based systems, often seeing this as a "pathway to a vocational skill." Other researchers have expressed concern however, that learners gain a better mastery of the technology involved than they do of the course content.

More independent research is needed to assess the effectiveness of various types of computer packages for learners at basic and more advanced levels. Although many evaluations list the features of various systems and discuss their benefits and drawbacks, there is little independent information on their ability to improve literacy skills; learning progress is not often measured systematically and users of these programs do not usually keep records of student progress. A number of researchers have stated that all of the major packages, including PLATO, Pathfinder, CCC, Invest and Autoskills, have advantages and disadvantages, and that any can be made to work in the proper context. The key is to understand the technology and its role in the learning process .. Technology must be managed; It cannot *be* the learning system.

Benefits and Drawbacks of Various Technologies

The reported ability of some computer-based training programs to dramatically improve learners' skills in a short time has generated an enthusiasm for the potential of these training methods. However, in addition to describing these and other benefits, researchers have raised a number of concerns about these training packages and about the use of other information and communications technologies.

Integrated Learning Systems People retain about

Integrated Learning Systems (ILSs) are computer-based or computer-Managed training packages that enable the student to advance through graded modules at his or her own pace. Many packages enable the student who successfully completes the program to acquire a General Educational Diploma (GED) from his or her province or territory. Teachers can customize the programs and, to a limited extent, can complement them with other learning techniques and materials. The student has an opportunity for self-directed study, with modules that he or she can complete when convenient, with the support of a teacher.

20 % of what they see, 30 % of what they hear, 50 % of what they see and hear, and up to 80 % of what they see, hear, and do simultaneously; to the extent that computer-based learning systems integrate these techniques, they can be very effective.

Some critics note that ILSs are not really "integrated" systems, in that many are not well connected to other training techniques and other technologies. Some teachers complain that the systems do not allow them easily to link the system's content to traditional lessons or exercises in other media. The interactive nature of these programs, however, can enhance the learning experience: Szuprowicz has found that people retain about 20 percent of what they see, 30 percent of what they hear, 50 percent of what they see and hear, and up to 80 percent of what they see, hear, and do simultaneously; to the extent that ILSs integrate these learning techniques, they can be very effective.

Researchers have expressed concern that these systems will not be developed to respond to the needs of the literacy community because it represents only a very small segment of the market for educational software. The Office of Technology Assessment (OTA) notes that:

The entire [U.S.] personal software industry had annual sales of about \$4.6 billion in 1990. In that same year, elementary and secondary schools spent about \$230 million for educational courseware. By comparison, OTA estimates that the adult literacy market had annual software sales in 1990 of roughly \$10 to \$15 million.

Other software

Literacy trainers also use more limited software programs, for drills in phonics or word recognition, for example, and "standard" business software such as word processing software. Roblyer, Catine and King found that "while the use of word processing does not seem to increase quality of writing, it does make students want to write more and makes them feel more positively about their writing. "

Audio-video technology

In their homes, many more learners have access to audio and video technology than to computers. Widespread access to cable service has also brought learning channels into many homes. This can be an obvious advantage for training programs, enabling teachers to assign home work to supplement course material. However, even these technologies can be out of reach for literacy students, who often lack the financial resources needed to buy videocassette and audio-cassette players, or to subscribe to cable service. Where use of these technologies is practical, researchers have found mixed results. Salomon found that students were better able to draw inferences from written material than from material presented on television, although he noted that students gain more from television when they are watching specifically for learning purposes.

Multimedia systems that incorporate CD-ROM technology can make learning more interesting and give the student access to large volumes of information. However, it will be some time before existing hardware is upgraded to include these systems, and before students, especially students of limited economic means, have access to this technology at home.

Networks and the information highway

Computer networks, E-mail, electronic bulletin boards and telecommunications technologies have created the potential for the classroom without walls. By using these communications technologies for distance learning programs, institutions can make learning accessible to students in remote communities and expand access to exceptional teachers and to courses that interest only a limited number of individuals in a wide region. It may be many more years before the concept of a computer in every home, or of a loaned portable computer going home with the student, become practical realities. In addition to the cost factor-which will limit the availability of portable computers in literacy and other programs, and . the number of people who have computers at home-there is a concern that students do not use equipment at home to complete lessons. While family demands, a part-time job, or other responsibilities may keep adults from attending classes outside the home, they may also keep

Any distance-learning program that contemplates learners using modems and networks to gain access to a diversity of learning opportunities should take into account the fact that these efforts require an ease with technology that few learners at basic levels will have achieved.

individuals from spending their time at home on the computer. An additional concern relates to line quality in remote regions; Poor communications line quality may make it difficult for some learners to gain access to distant networks and on-line training programs.

Any distance-learning program that contemplates learners using modems and networks to gain access to a diversity of learning opportunities should take into account the fact that these efforts require an ease with technology that few learners at basic levels will have achieved. Even for learners at more advanced levels, such access will require them to deal with common system problems and to navigate communication "trees" or to assess and choose among many available options. While networks provide impressive access to a wide array of information sources, the communications systems are not perfect and the links between systems are not seamless. Access to the information highway will expand learning opportunities, but the use of these opportunities must be geared to the specific needs and capabilities of the learners and the learning programs involved.

Trainers' Needs and Concerns Regarding Technology

There is a widespread consensus that computer programs cannot replace the human factor in education and training. For learners in basic literacy training this need is especially great. The Office of Technology Assessment finds that, "there is no evidence from case studies that technology will usurp the critical relationship between teacher and learner. . . ultimately it is the teacher who must guide the use of technology and shape its contribution to the overall learning context." Stahmer, Bourdeau and Zukernick, in a study of technologies and lifelong learning, insist that the social component--contact with other learners, tutors and mentors--is important in the learning process. Computer-based training systems are not "stand-alone" systems. They can be very effective components of a training program that includes group work and one-on-one teacher-student interaction. Thomas notes that computers must be integrated as one element part of a learning program:

Researchers stress the integration of computers into the overall curriculum plan or practice. They stress that the computer is a tool, and it alone cannot teach literacy. The human interaction provided by contact with peers and instructors is essential.

Canadian content

Additional concerns expressed about software programs include a need for greater Canadian content and for programs that relate to the world of work. The lack of Canadian content may be a problem related to simple economics. The lack of a large market in Canada discourages the private sector from investing the time needed to develop and test new Canadian programs. If Canadian software users--literacy trainers, employers, educators and others--can reach a consensus on their needs in computer-based basic literacy training, with links to more advanced or specialized education and training programs, software developer may perceive a potential

market may perceive a potential market large enough to merit further research and product development. Opportunities to expand the market for Canadian-content products and services within Canada and abroad must be determined with the ultimate needs of Canadian learners in mind.

Employment-related learning

While it is widely perceived that learners want program content to be linked to potential employment needs, Thomas and Buck note that many learners who failed in school want learning materials that look like "real school." Some learners may believe that learning materials that look too relevant are not educational enough. It may be that learners need to perceive both an employment link and a strong element of basic education in their learning materials. A related concern, reiterated by the National Center on Adult Literacy at the University of Pennsylvania, is that, "much of the 'adult literacy' software currently available is actually repackaged K-12 software inappropriate for adult use." The perceived lack of potential demand, and of a clearly articulated need, may contribute to this problem.

Workplace training

Workplaces often incorporate basic literacy training into a context of skills upgrading, usually in response to the introduction of new technology in work processes. Employers purchase training programs from hardware suppliers, contract out to private training concerns, or support employees in training programs at accredited learning institutions. According to Stahmer et al., training challenges for employers include:

- making training a responsibility of line managers, so that they are encouraged to upgrade workers' skills continuously;
- using the same computers and programs used on the job for training purposes, so that workers learn on systems that are familiar to them;
- finding flexible training packages that enable employees to learn in modules so that lengthy spells away from the job can be minimized; and
- developing new budget systems that assess training value based on learning credits instead of time spent in learning, so that more efficient computer-based systems are not dis-favoured in budget decisions.

If Canadian software users--literacy trainers, employers, educators and others--can reach a consensus on their needs in computer-based basic literacy training, software developers may perceive a potential market large enough to merit further research and product development.

Training the Trainers in Technology-Based Instruction

While the focus of most research on the use of technology in literacy and other adult basic educational programs focuses on the desirability of using these new methods in training programs, or on their advantages and disadvantages, an equally important concern is the training of literacy instructors. Fournier and MacKinnon, in a study of *Educational Opportunities on Canada's Information Highway*, assert that:

Teacher training has been recognized as a major issue in the implementation of C&IT [Communications and Information Technology] in classrooms. Teachers must be shown how to effectively implement new technology; how to use it to enhance their courses; and how technology can be used to help them accomplish their other educational goals. ...the teaching "establishment" was reluctant to use the tools associated with the Information Highway and move away from traditional teaching methods.

For instructors to be able to use technology efficiently and effectively, they need to be conversant with elements of computer and network design and techniques to modify software packages or to link various software programs; they must also be aware of available opportunities to complement computer learning systems with low-tech systems. In addition, Thomas and Buck point out that instructors need to understand how different educational philosophies can be imbedded in learning resources and what impact technology has on teachers and students.

Teacher reluctance to use new technologies will lessen as they become more aware of how to use the technologies and more capable of modifying lessons and programs to suit their training goals. The OTA found that "[e]ducators who are least experienced with technology tend to use computers more for drill, practice, and automated tutorials than for other types of activities ... " Studies have shown that new users of technologies tend to limit their use to activities originally developed for traditional teaching methods. This may be because, as Stahmer et al. point out, many teachers who are using computers have not received adequate training in their use. Training will also lead to more creative uses of technology. Quoting an Australian study, Stahmer et al. suggest that, "Putting a talking head on a videoconference link is boring precisely because it simply uses the old method of teacher-focussed instruction with another form of delivery. "

An additional barrier to using technology is the need for technical support. The OTA reports that, as technologies are used more, educators require the support of

... specialized personnel to evaluate hardware and software, perform systems integration, troubleshoot, and switch equipment over to different applications. In most of the sites visited, there were one or more "gurus" who, by virtue of interest and capability (seldom formal training), had acquired the expertise and knowledge

needed to keep the technology working for their less mechanically minded colleagues. These gurus are critical to the functioning of the programs-it is they who patch together the systems with baling wire and cellophane tape-not to mention with recycled disc drives and self-taught midnight programming.

Creating a Learning Environment That Supports Technology

The impact of technology is pervasive. In the office environment, for example, the proliferation of personal computers has led to the redesign of offices into open-concept "work stations" with enhanced telecommunication links, restyled desks with built-in keyboard trays and equipment stands and "ergonomic" operators' chairs, and reconfigured common areas for informal meetings and brainstorming sessions. Technology is not just an "add-on" in the work or learning environment. Fournier and MacKinnon point out that the "utilization of technology resources to their potential requires restructuring the physical space, curriculum, and scheduling arrangements in school." The same is true of the literacy training centre.

Cooperation may be a key to gaining access to more suitable learning environments without a large financial investment. Stahmer et al suggest, for example, that:

Getting suitable hardware and support services to learners is a key priority. A number of factors suggest that learning centres or "learning hubs", rather than homes, will be the predominant setting for learning in the near and medium term. In-house programs have shown that learners generally do not pick up on the option to study at home.... The fact that the capital cost of hardware for advanced systems is relatively high and requires a fair number of users to justify the investment is a further, practical reason for the use of learning hubs.

While the private sector may be the likely source of development of learning hubs, there may be practical advantages to having employers, literacy providers and others sharing administrative tasks and creating jointly managed learning hubs. If learning hubs can be managed effectively to support literacy training during a part of the day or week, and work-related training in other times, employers and literacy trainers may be able to benefit from each others' expertise and resources, both financial and instructional.

If learning hubs can be managed effectively to support literacy training during a part of the day or week, and work-related training in other times, employers and literacy trainers may be able to benefit from each others' expertise and resources, both financial and instructional.

Additional Concerns

French resources

An important concern raised in the literature, which relates to all of the questions raised above, is the lack of availability of French software, networks and other technological resources for literacy training. Fournier and MacKinnon call for support for the development of French content on the Information Highway and in software applications. They also suggest that funding for the development of resources in Aboriginal languages should be considered.

Policy development

If organizations-public, private and not-for-profit-involved in literacy training and adult education are able to form formal or informal alliances to pool resources, as suggested by Stahmer et al, they can also join forces to advance the use of information and communications technologies in training. This role could include monitoring developments and recommending approaches for technology networks, making presentations at public hearings on tariffs and services, setting directions for public investment and for research, and helping to guide the development of new software applications and hardware suitable for training purposes. The OTA points out that "the lack of common performance objectives for literacy programs" is part of the reason for the high cost of software programs. They found that, "Industry respondents believed that commonly accepted standards and objectives could reduce customization costs and over time bring down prices. "

Conclusion

New information and communications technologies represent tremendous opportunities for literacy training and adult education, but only if their development and use is managed carefully and if access to these resources can be improved. New technologies are not the total answer to the future of literacy training, nor do they represent a repudiation of past and current practices. On this, researchers are unanimous: technology is but a tool. The answers to the questions that technology raises will be developed by the same individuals who have and will continue to make these technologies work.

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The author would like to express her appreciation to Joel Reimer and Kim Wendel for the opportunity to draw on their findings and insights after reviewing a pre-publication copy of their forthcoming research paper, *Technology-Assisted Instruction in Training and Education in Canada*, to be published by Strategic Policy, Human Resources Development Canada.

V

PARTICIPANTS' ISSUES:

**SUMMARY AND ANALYSIS OF RESPONSES TO
A PARTICIPANT QUESTIONNAIRE**

January 4, 1995

**Anna Stahmer & Associates
56 Castle Frank Road
Toronto, Ontario M4W 2Z8**

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PARTICIPANTS' ISSUES PAPER

A common vision:

Agreement is high that technologies can play important roles to support learners, practitioners and organizations in the literacy and adult basic education arena.

Provisos, that generally accompany this agreement, are that

- Technologies are useful only when they serve identified needs of learners and practitioners (i.e. these needs should be the basis for the use of technology);
- Learning models are still lacking that integrate technologies with other essential factors, such as social interaction or exploratory learning;
- Practitioners lack access to support, such as professional development or to information exchanges with colleagues about materials and best practices;
- Literacy practice relies on significant support from volunteers and care has to be taken not to overtax their capabilities and goodwill;
- To achieve policies that broaden access to the use of technology and that result in suitable materials and learning models for learners and practitioners, the link between technology and improvement in literacy indicators, such as performance or access, needs to be strengthened.

Areas in which technologies have been valuable in the past were:

- **for the learner:** motivate, offer self-esteem in terms of working with technologies and of acquiring employability-skills (eg keyboarding), or open opportunities for more autonomous learning, including ILS-based learning for upper literacy learners (GED studies). Benefits from technology-based approaches for youth were highlighted;
- **for the practitioner:** freed up time to work with learners who need more personal attention, be able to exchange experiences and to do joint research and problem-solving with colleagues, or access information;
- **for literacy organizations:** improve efficiency and access to information resources.

A general sentiment is that technology will increase in importance in the practice of literacy. Computer-literacy is becoming a pre-requisite to function in society, and the definition of literacy itself may need to be expanded to include this vision.

Areas in which technology appears to be suitable in the general practice of literacy are (in order of apparent priority):

Related to the **needs of practitioners:**

- Professional development (PD) for practitioners. The technologies mentioned in connection with PD include computer-based technologies, as well as audio and videoconferencing, and computer-mediated communications.
- Meetings and coordination among practitioners, access to and searches for documentation, research and best practices, special interest group discussions - all of this mediated by computer communication systems;
- Creation of learning-teaching materials by practitioners, as a result of user-friendly authoring systems;
- Assistance from computer-based tools in assessing learner needs.

Related to the **learning-teaching process:**

- Writing skills, often using standard word-processing packages;
- Employability skills, from the use of computer technology;
- Numeracy, language and grammar skills with existing computer software packages to supplement and complement classroom work or to offer more individualized learning and tutoring arrangements;
- Drill and practice opportunities that are crucial for applied learners;
- Real-life aides for applied learners to be used at home and in workplace settings, e.g. how to access information;
- Feedback re: learning needs and learner support strategies with computer-based assessment software;
- Individual, isolated learners supported by videoconferences (audio-conferencing is seen as having less real interactive capabilities);
- Individual learners, at home, working with Interactive TV;
- Remote or rural learners supported by TV (with support packages);
- Learner-to-learner links (moderated by tutors) for real-language practice;
- Adult learners will benefit from the use/support from a range of technologies;
- Range of opportunities for disabled learners;
- Workplace and life-skills training may benefit from future virtual reality applications and simulations.

Related to **organization and management**:

- Access to information on materials, research, etc;
- Television to promote the concept of adult literacy, give information on opportunities;
- Administration, such as student registration, tracking performance.

Limitations of technology can be summarized as follows:

- Initial and operating costs of technology-based systems can be high and may require substantial numbers of learners to achieve a low or affordable cost per learner;
- Access is uneven and often unavailable, for practitioners as well as for learners. Technology, such as TV, radio have some merit because of their coverage, especially in rural areas and home settings;
- Databases, e-mail and computer communication services are not very user-friendly, it may be difficult to get on-line, information may be outdated and they often provide an information overload;
- Computer-based systems do require a fair degree of technical support to which many organizations, practitioners or learners do not have access;
- Materials that are suitable for adult audiences are neither abundant, nor continuous;
- Learning models that truly meet the need of diverse adult audiences and that incorporate technology and tutorial and other services, are not well understood;
- Technological limitations may be easier overcome than institutional or financial barriers, fear among practitioners, or user attitudes.

Prerequisites to overcome limitations include

- Broad recognition that literacy is about empowering people to function with competency in today's society, and that includes technology skills;
- Vision-setting within the literacy community and in individual organizations to identify where technology can fit (and where not) into the practice of literacy and to clearly set the directions for action (including budget allocations);
- Increased access to and demand for literacy programs, may lead to sufficiently large numbers of learners and create a market for a variety of relevant products and services;
- Practitioners who are committed and sensitized to the benefits of technology and how it can meet learner needs;
- Professional development programs;
- Long-term commitments, stable and continuous funding for literacy programs;
- Adjustments to government funding programs to allow for the purchase of hardware, or facilities retrofitting;
- Development of individual learning plans and learning philosophies that match technology to an individual's learning path;
- Longitudinal research.

How do we get closer to the vision?

Capacity-building in the literacy community itself might include:

- Capacity to critically examine where new technologies fit into the practice of literacy, based on learner needs. This can be partially achieved through cooperation in computer conferences, e-mail, and by feeding new information into and by using databases;
- Cooperate in the development, implementation and assessment of pilot projects;
- Cooperate in the development of practical guidelines that organizations can use to build capacity and to assess needs;
- Cooperate in the development of skills profiles of literacy practitioners;
- Cooperate in developing and operating PO activities and support services and help lines;
- Look at cost sharing equipment and facilities with other organizations, eg shared use, after hours, etc;
- Best case examples and spokespeople to demonstrate and support those wishing to explore technology;
- Groups with experience help others;
- Share experiences, successful and not successful ones, to raise knowledge, in a journal, bye-mail;
- Cooperate with developers of tools and services to make sure that the products fit the needs of the users;
- Brainstorm on how the community can best cooperate with the private sector.

Government and public policies might cover:

- Encourage access to literacy training in general (English and French);
- Review and integrate technology considerations into all program and funding decisions;
- Review present funding criteria, which, for example, may not permit the purchase of equipment. Assess different criteria, eg to oblige organizations to pass used equipment on to other public service organizations;
- Develop a national needs statement through a needs analysis and survey of stakeholders from the frontlines; .
- Be committed to flexibility and continuous research;
- Review policies that might restrict or discourage people seeking access to literacy services, such as course load, hours of training;
- Provide incentives to literacy organizations to use technology. Remove access barriers for literacy organizations to national programs that promote use of technology, eg SchoolNet;
- Coordinate use as well as program funding principles by different government departments and levels;
- Establish formal linkages between ministries (federal and provincial) that deal with technology and with literacy and issue a policy statement of the importance of a national electronic network and database for the community;
- Establish an information exchange mechanism between policy and funding decision-makers in the different jurisdictions, so they can benefit from each other's experiences;
- Do not develop new services, encourage partnerships among and with' existing service providers.

The private sector might do the following

- Recognize and speak out on the importance of literacy, including computer-literacy;
- Pilot new approaches to workplace literacy that demonstrate the benefits of the link between technology-supported basic skills development and working;
- Invest in the development of user-friendly technology, eg Graphical User Interfaces, etc;
- Cooperate more directly with the literacy community in the development of technology-based materials to ensure these address the needs of adult learners and practitioners;
- Supply out-of-date equipment, eg to support writing skills.

What can the NLS do?

- Provide a stronger Vision as a rallying point to meet future needs of the literacy community, which might include a new definition of literacy to include a concept of technology-skills;
- Be more pro-active in soliciting and defining projects or activities to support, such Vision;
- Pay special attention to promoting the use of technology in youth literacy programs;
- Continue activities where support is achieving multiplier effects, eg in the area of PO;
- Continue to support pilot projects or materials development that demonstrate the effectiveness of technology in literacy when used well;
- Strengthen research capacities and needs analysis prior to supporting projects;
- Ensure that project information, research and other activities receive broadest possible distribution and exposure;

What can we do together?

- Have a Vision and plan and continue discussions that are beginning with the Conversation. Bring the discussions into literacy organizations;
- To track and assess the usefulness of technology to the practice of literacy, and to the needs of the learners, establish a national working group of practitioners and support lead specialists;
- Be committed to the flow of good and reliable information that speaks to the needs of practitioners. This can take a mix of different forms, such as newsletters, teleconferences, bulletin board services, database access;
- Share approaches to PO, and look into pooling resources for PO tools;
- Undertake innovative projects in partnership with the private sector that can lead the way to future applications in workplace literacy;
- Work with developers to help them develop materials that are on-target in terms of the needs of the literacy community.

VI

PARTICIPANT QUESTIONNAIRE:

**POLICY CONVERSATION ON NEW INFORMATION
AND COMMUNICATIONS TECHNOLOGIES**

January 1995

Instructions:

- (i) Complete survey to give your perspective on the issues and questions below. We hope to be able to circulate the summary information prior to the meeting (January 12-14) and appreciate your prompt attention.
- (ii) Anna Stahmer will call you early next week to see if you prefer to give the information by phone and to set the time for telephone interview.
- (iii) Or mail or fax completed survey by December 30, 1994 to:

Anna Stahmer
56 Castle Frank Road, Toronto, Ontario, M4W 2Z8
Tel/Fax (416) 929-2297

PLEASE NOTE THAT THE DEFINITION OF TECHNOLOGY AT THE POLICY CONVERSATION IS BROAD, I.E. IT INCLUDES THE FULL RANGE OF HARDWARE AND SOFTWARE. THOSE THAT DELIVER ACTUAL LEARNING, THOSE THAT SUPPORT STUDENT MANAGEMENT, THOSE THAT ALLOW ACCESS TO INFORMATION ABOUT LEARNING MATERIALS – AND THEY CAN BE STAND-ALONE OR NETWORKED AND ON-LINE.

I. PARTICIPANT PROFILE

Name _____ Province _____

Organization _____

Mandate / Goals of your organization

II. YOUR EXPERIENCE: PAST AND PRESENT

5. What is your specific experience related to new technologies?

6. What are your specific interests with respect to new technologies?

7. What are your specific interests with respect to literacy and learning?

III. WHERE WE ARE

8 . a) Technology has been of value to literacy practice.

Strongly agree

Disagree

Neither Agree
Nor disagree

Agree

Strongly Agree

b) Explain your answer.

9. a) What technologies are you aware of that are of value to literacy practice and for what reasons?

b) What are the limitations of these technologies?

c) What are necessary prerequisites to take advantage of them? (e.g. facilities, equipment, staff development)

10. What literacy practices are you aware of that lend themselves to the use of new communications technologies?

IV. WHERE WE MAY WANT TO BE

11. a) Technology can be of value to the practice of literacy

Strongly
agree

Disagree

Neither Agree
Nor disagree

Agree

Strongly Agree

b) Explain your answer.

12. a) What technologies are on the horizon that might be of value to literacy practice and for what reasons?

b) What do you see as their principal limitations?

c) What are necessary prerequisites to take advantage of them? (e.g. facilities, equipment, staff development)

V. HOW DO WE GET THERE

13. What actions are required to ensure that the literacy community has the capacity to take advantage of new technologies?

VI. WHO SHOULD DO WHAT

14. Please comment on the role played by the National Literacy Secretariat to date in terms of its effectiveness.

15. Please comment on the role of the government generally in support of literacy through the use of new technologies

16. What public policy measures would further your vision of future use of technology to support literacy?

17. Please comment on the role of the private sector in supporting literacy through the use of new technologies.

18. Please comment on the role of literacy organizations in supporting literacy through new technologies..

19. How can we best work together to ensure that the literacy community can take advantage of the emerging future technologies.?

V. COMMENTS

VII

AGENDA

**Policy Conversation on New Information
and Communications Technologies**

January 12-14, 1995

Agenda

January 12, 1995

12:00 Noon Buffet Lunch

Setting the Context

1:15 - 2:45 p.m. An introduction to the concept and expectations of the Policy Conversation, NLS activities to date in New Technologies, and the diverse background and experience of the participants

The past Tense

3:00 - 4:45 p.m. **The Opening Conversation: Surveying the Landscape of literacy and New Technologies.** Presentation on the *Participants' Issues Paper* prepared by Anna Stahmer followed by an informal conversation allowing participants their views.

4:45 - 5:00 p.m. A review of the agenda featuring the processes in place to facilitate our conversations as well as the flexibility inherent in the approach

5:00 p.m. Reception

January 13, 1995

The Present Tense

9:00 a.m. - Noon **Conversation #2: Contemporary Themes.** What are the issues? Contemporary themes will be jointly identified and prioritized as discussion topics. Participants will self select into one of a series of concurrent informal conversations -- each on a specific theme -- and develop three questions that frame the issue. These questions will set the agenda for the formal conversation to follow.

January 13, 1995

The Future Tense

1:00 - 4:00 p.m. **Conversation #3: Investing in the Future.** From what we have discovered, what opportunities, challenges, and impediments do we need to table in order to address community needs. What theme / issues / principles are important to the future development of Literacy and New Technologies? Where is the nexus? How do we grapple with this together? Informal conversations will lead to a formal report on the key ideas from each conversation.

4:00 - 4:45 The day in review. Time allotted to deal with outstanding and/ or impromptu conversations that the participants would like to initiate.

4:45 - 5:00 Review of agenda.

January 14, 1995

The Future Tense

9:00 - 10:15 a.m. Conversation #4: Where do we want to be in 5 years? Where do we want to be in 10 years? Where do we go from here? What kinds of activities need to be taken by literacy organizations? Should there be a focus on raising awareness of the value of new technologies or should it be on supporting the infrastructure? Should emphasis be placed on using new technologies for curriculum development or for networking and communicating?

10:30 - 11:30 a.m. **The Final Conversation: What Have We Learned?** How do we work together to interact with the vendors and business involved in new technologies? How does the literacy community take full advantage of the information highway? How are learners best served within the context of technology? How do we encourage good practice and what are the elements of good practice? How do we change the landscape and what tools are needed to do so? The substance of our conversations will be clustered around three benchmarks:
(i) The Future of Literacy and Information Technology;
(ii) The Future of Literacy and Communications Technology;
(iii) The Future of Policy Conversations.

11:30 a.m. - Noon Closing remarks by James Page followed by evaluation.

Policy Conversation on New Technologies at a Glance

Thursday, January 12, 1995

Friday, January 13, 1995

Saturday, January 14, 1995

<p>A.M.</p>	<p>A.M. The Present Tense</p> <div style="border: 1px solid black; padding: 2px; text-align: center;"> <p>Conversation #2: Contemporary Themes</p> </div> <p>9:00 - 9:15 Introduction: Identification and Prioritization of Contemporary Themes</p> <p>9:15 - 10:30 Concurrent Informal Conversations on Various Contemporary Themes and Development of Key Questions</p> <p>10:30 - 10:45 Break</p> <p>10:45 - 12:00 Formal Conversation Focused on Key Questions for Each Theme</p>	<p>A.M. The Future Tense</p> <div style="border: 1px solid black; padding: 2px; text-align: center;"> <p>Conversation #4: Where do we want to be in 5 years? Where do we want to be in 10 years?</p> </div> <p>9:00 - 9:15 Introduction</p> <p>9:15 - 10:15 Informal Conversations</p> <p>10:15 - 10:30 Break</p> <div style="border: 1px solid black; padding: 2px; text-align: center;"> <p>The Final Conversation: What Have We Learned?</p> </div> <p>10:30 - 11:30 Formal Conversation: (i) Future of Literacy and Info. Technology; (ii) Future of Literacy and Communications Technology; and, (iii) Future of Policy Conversations</p> <p>11:30 - 11:40 Closing Remarks by James Page</p> <p>11:40 - 12:00 Evaluation</p>
<p>P.M. Setting the Context</p> <p>1:15 - 1:25 Introduction by James Page</p> <p>1:25 - 1:40 NLS Activities in New Technologies by Brigid Hayes</p> <p>1:40 - 2:45 Introductory Exercise</p> <p>2:45 - 3:00 Break</p> <p style="text-align: center;">The Past Tense</p> <div style="border: 1px solid black; padding: 2px; text-align: center;"> <p>The Opening Conversation: Surveying the Landscape of Literacy and New Technologies</p> </div> <p>3:00 - 4:45 Presentation on Participants' Issues Paper by Anna Stahmer followed by informal conversations</p> <p>4:45 - 5:00 Review of Agenda</p>	<p>P.M. The Future Tense</p> <div style="border: 1px solid black; padding: 2px; text-align: center;"> <p>Conversation #3: Investing in the Future</p> </div> <p>1:00 - 1:45 Introduction: Identification and Prioritization of Issues that are Important to the Future</p> <p>1:45 - 2:45 Informal Conversations</p> <p>2:45 - 3:15 Break</p> <p>3:15 - 4:00 Formal Conversation Featuring Reports From Informal Discussions</p> <p>4:00 - 4:45 Summary followed by Parking Lot Session</p> <p>4:45 - 5:00 Review of Agenda</p>	

VIII

EVALUATION SUMMARY:

Policy Conversation on New Information and Communications Technologies

January 12-14, 1995

Policy Conversation on New Technologies

January 12-14, 1995

This report is a tabulation of the evaluations completed anonymously by 17 participants. The number of times that a comment is reiterated by different people is noted in brackets before the comment.

1. Rate the dimensions of the Policy Conversation on a scale of 1 (low) to 10 (high) by circling a number on the scale to the right of each factor. (May not add up to 100% due to rounding.)

<u>Pre-Conversation</u>	<i>Low</i>										<i>high</i>
a) <i>Participants' Issues Paper</i> by Anna Stahmer	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	11.8%	29.4%	23.5%	17.6%	11.8%
b) <i>Literacy and the New</i> <i>Information and</i> <i>Communications Technology:</i> <i>A Commentary on Some Key</i> <i>Reports and Studies</i> by Joanne Godin	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	11.8%	41.2%	23.5%	17.6%	0.0%
<u>The Conversation Processes</u>											
c) <i>Setting the Context</i> - Thursday Afternoon	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	11.8%	17.6%	41.2%	23.5%	0.0%
d) <i>The Present Tense</i> - Friday Morning	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	23.5%	35.3%	23.5%	11.8%	0.0%
e) <i>The Future Tense</i> - Friday Afternoon	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	29.4%	17.6%	29.4%	11.8%	0.0%
f) <i>The Future Tense</i> - Saturday Morning	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%	17.6%	23.5%	5.9%	29.4%
<u>Facilitation</u>											
g) <i>The Facilitator</i> - Carol MacLeod	1	2	3	4	5	6	7	8	9	10	NA
	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	11.8%	23.5%	29.4%	29.4%	0.0%

2. List two things that you liked most about the Policy Conversation

- (2) - It provided an opportunity to meet people who are both informed about some aspects of the technology and committed to some aspects of literacy.
- Opportunity to get away from work and reflect on the issues discussed.
- Jim's summary was very important. I think most people heard some of what they had said. Also Carol's summary was excellent.
- The support from Dawson, for example, extra xeroxing, food and drink. It was a wonderful place to hold it.
- Preparation for plenaries in small groups.
- (3) - The conversation process - Thursday afternoon - icebreaking is valuable, putting names to faces and giving background info gives context to their input.
- Good organization/logistics.
- Pre-meeting info gathering and intros the first day to establish background and baseline.
- (5) - Opportunity to learn about new initiatives and to share/exchange information and thinking with others from across the country. _
- (2) - The informal structure of the discussions enabled participants to discuss freely their concerns and aspirations.
- (2) - Carol and NLS Facilitator were efficient and caring.
- Chance to clarify some the issues for the future.
- The fact that it happened - good idea.
- Large group discussion much more effective than small group.
- (5) - The mix of expertise - not just literacy types naval gazing.
- Extremely stimulating conversation and linkages and ideas that result.
- Wide range (wealth) of comments.
- Representation from constituency.
- (2) - Ability to give input.
- Relationship between the literacy and technology specialists. -
- The enthusiasm and excitement of the participants, including those who organized the conversation.
- The search for solutions to the problems.
- The respect for what others had to say.
- Common concerns encountered by many participants.
- The ambiance.
- The level of discussion.

3. List two things that you liked least about the Policy Conversation

- The price of an informal discussion without an intent to resolve issues is that one leaves with an uneasy feeling about how best to move forward.
- I would like to feel that many of the excellent comments and suggestions will see some kind of resolution, but am unsure of the mechanism for this to happen.
- The summary each time by Carol- Why bother? Much missed. You have transcript anyway.
- Lack of control over process - process purports to give control to participants but since we don't know which suggestions might be implemented people seemed to feel nervous

about the process. This process requires a high level of trust around the question of who is filtering good suggestions from bad. (feel much better about this after Jim's last talk)
- Some representatives of major groups did not attend. Notably from the communications infrastructure.

- Once in awhile the Facilitator was a little too tight.

- I'm not sure how much the non-literacy "tech" participants actually contributed.

Because they were all French and sometimes translation failed, it may have been hard to follow.

- Opening icebreaker introductions - I think that for meetings of this nature, it's strategic for people to introduce themselves and their own work/context.

- Somewhat frustrating to talk only about the principles and not spend some time exploring some possible concrete models.

- I expected the conversations to be intense but they were more intense than I expected. I expected more info on technology for those in the trenches.

- Although I enjoyed the philosophical debates, some became somewhat repetitive.

- On Thursday pm, the past session did not seem like it was leading anywhere in spite of the good job Anna did.

- Short conversational period Thursday afternoon.

- Ignorance of the Secretariat's mission and short- and long-term objectives.

- Ignorance of what purpose the conversation will serve.

- Not enough time for all the activities.

- The overemphasis on the importance of university research at the expense of program-based research that could be carried out by the community.

- Workshop reports for the last topic would have made it possible to improve the discussion and go straight to the heart of the matter.

- Difficulty organizing all the ideas expressed in relation to priorities.

- The weather.

(2) - Comments on Saturday seemed somewhat scattered. I hope the key ideas can be pulled together from the various sources.

(4) - No comment

4. What would you recommend as ways to improve Policy Conversations in the future?

-While maintaining the informal structure, organizers might consider ways of involving participants in structuring the next step - where do we go from here?

- The conversations might offer at least a few definitions that would enable some focused discussion (eg. what is "new" technology?, what is the current NLS policy with respect to literacy and technology?)

(2) - Full day session was too long - the last hour, due to air circulation, day length etc., many people were falling asleep. Small break or energizer might be useful.

- I would have liked to see conversation build to concrete suggestions. Let people tell their dreams at the beginning too.

- Add demonstrations of the possible solutions.

- Make sure infrastructure/social policy people attend.
- I feel that we have only begun to scratch the surface. After they have been completed, I think it will be necessary to review the recommendations as an integrated package for policy discussions.
- Try keeping people in same small groups throughout.
- (2) - Identify the objectives more clearly from the outset.
- More preparation time.
- Have the questions in French on the loose-leaf sheets, as I believe I missed some nuances.
- I would like to see a few discussion points further clarified in order to keep the discussion more on topic.
- In my opinion the format should be retained. The problems are a result of our not being used to discussion in such a context.
- No particular recommendation. The format is interesting, flexible and very creative. However, the aspects of the problem needing to be improved should probably be listed, as should the elements to be preserved.
- Have breakout rooms near main meeting room.
- You might take some of the findings from pre-meeting questionnaire and link them into "assignments" or issue setting for working groups.
- I'm not sure that the "informal/formal" conversation model worked as effectively as it might. I think there was some good small group discussion but that it was sometimes difficult to repeat it in the full group. Perhaps, there is some value in the usual "reporting back" model. When we used the "report back" process, I think it was followed by more participatory discussion on the large groups.
- It's not an improvement but a continuation: I appreciated that at least from my province, the people invited to the conversations are not just the provincial government literacy coordinator, but other key players. While we all work together, we definitely have different ways of being and working in literacy, and it is good to be able to give voice to our different ways.
- Although the focus of the conversations was to be the future, I would have enjoyed more sharing with regard to the present and existing uses of technology.
- No changes in the process; it was clearly moving in an obvious direction by Friday morning.
- Ensure that session on Saturday where final comments are made need to remain focused on the future.
- If non-literacy people are included some basic documentation/information about literacy delivery systems etc. so we don't spend too much time "educating" the others.
- No comment.

5. **The last word is yours. Comments on the substance of our discussions.**

- Literacy folks tend to be generous people with both their time and resources. It was encouraging to see some participants offering their knowledge and services to assist others in accomplishing their goals. I think that a forum of this sort provides an excellent opportunity to enlist voluntary support for finding answers to a good number of the participants concerns. As well, I think that the commentary by Joanne Godin is excellent in stimulating thought about this complex subject. Coupled with Anna Stahmer's finding, these reports could be more clearly intertwined with the conversations, allowing participants to deal more specifically with some of the work done in the past (successes and failures) for example by talking selectively about a few of the projects listed in the NLS handout. This was the first time I had heard of many of the projects, and I am optimistic that they could shed some light on the directions we should consider in the future. Thank you once again for inviting me to participate. And please call on me for any voluntary assistance you may need.

- Let the need drive the technology. Identify need first then look for appropriate technology. We need to see ourselves as able to choose among technologies or even to choose whether or not to use a particular technology. Some concrete suggestions: i) access - lift capital (\$) restriction on projects for a 3 year period. ii) training - support with \$ peer training for technology rather than large PD activities. To learn this stuff you need close, hands-on help. iii) research - some info to arm the local literacy person who will be sitting on a community planning board to support the idea that literacy is integral to job training or preparation.

- I have really enjoyed the opportunity afforded me in this conference. I hope that positive and concrete plans come out of this so that we can move quickly to achieve some of the things we all agree must be done. NLS has been extremely helpful in the past and I look forward to your continued help in the future.

- The discussion raised many questions and challenged us to stretch our imaginations and encouraged us to reflect on what are we doing to advance the use of technology. The best government meeting that I have attended. Great work. Thanks for bringing together such broad range of people.

- I found it useful. I had a chance to think and talk about an issue for 2 days. Normally it's 1 issue per minute. Intend to follow up on a number of fronts when back home.

- I missed more of a link with workplace literacy and technology regarding employability skills – but that's personal interest.

- I was surprised that some people had agendas. At first I felt annoyed by this, until I realized that these separate agendas came from people whose vested interests are not in the literacy community. With that insight, I was able to see that these contributions kept us from viewing the issues and participating in the process as a gelled mass. I appreciate the inclusive effort in the planning of participants and I encourage the continuation of the practice. Many times when I participate in discussions I am bursting with comment. Here I felt that issues and perceptions were solidly and clearly presented and that my view as often expressed quite elegantly by someone else. Although I spoke little, I was intensely engaged. I gained new insights and feel a new level of solidarity. I feel honoured to have been part of this process.

- I believe that Jim's summary of principles that he will consider in developing policy were excellent and I was very happy to see the priority of learner needs (identification and focus) and the recognition that the introduction and use of new technology is difficult when programs exist on shaky foundations.

- It seems to me that there are many pressing and immediate problems dealing with the implementation of technology. In general, there seemed to be consensus on a number of issues, probably even before the conversation began. My personal preference would have been to identify a problem, and have various solutions (and corresponding critiques) suggested. Using the same model- consensus is not required and I think you would have a very interesting discussion. The conversation that occurred was also interesting but my preference is to deal with issues on a more concrete level. I also think the interaction among the participants over coffee, dinner, etc. is extremely valuable, something that ironically would not have occurred using a technology such as video-conferencing.

- I think that the discussions on Friday were particularly useful. People readily identified present issues and there was considerable overlap from group to group. As well, people identified principles to be used for future action very well. These two things were particularly well done and the outcomes useful to me. Carol was an excellent facilitator. I look forward to the document that results.

- Stimulating - intend to develop/organize provincial conversations around "nerds". Need some follow-up from meeting - summaries so can communicate to the field. Knowledge that conversation is useful and will lead to constructive actions. Hope ways can be made/formed to facilitate networking and joint action among literacy field.

- A first step perhaps, but a genuine step in the right direction. Thank you and see you soon.

- Some people are too eager to "sell their line" and "look after their own interests". I would have preferred it if these initial discussions were more general and methods other than this meeting were used to provide specific information. Very good conversation in general. I was pleased with this format and it should be retained. Thank you for the invitation. I appreciated having the opportunity to express our point of view and provide you with feedback.

- I hope that the results of the conversation will help influence NLS approaches in the future. However, the NLS must remain attentive to the needs of each region. Many thanks for the opportunity to discuss these topics.

- Technology is an up and coming topic, no doubt about it! but what about literacy? I think the problem must be approached in terms of its ins and outs: helping adults who have a literacy problem (intervention) and helping young people as soon as basic learning difficulties are noticed (prevention). It is to be hoped, in this way, that the literacy problem can be nipped in the bud.

(2) - No comment.

IX

LIST OF PARTICIPANTS:

**Policy Conversation on New Technologies
and Literacy**

January 12-14, 1995

**NEW TECHNOLOGIES POLICY CONVERSATION: January 12.14, 1994
PARTICIPANT LIST**

Keith Anderson
Alberta Advanced Education and Career
Development
Adult Development Branch
10th Floor, Commerce Place
10155 . 102 Street
Edmonton, Alberta
T5J 4L5

(403) 427-5624
(403) 422-1297 (fax)

InterNET:
andersonkeonald.fanshawec.on.ca

Flo Brokop
STAPLE Project
c/o Education Policy Studies'
7th Floor, Education North
University of Alberta
Edmonton, Alberta
T6G 2G5

(403) 492-2984
(403) 492-2024 (fax)

Don Bentley
SARAW
Neil Squire Foundation
Suite 220, 2250 Boundary Road
Burnaby, British Columbia
V7G 1L1

(604). 473-9363
(604) 473-9364 (fax)

InterNET: don_bentley@mindlink.bc.ca

Betty Butterworth
Senior Manager
Literacy Section
Learning and Employment Preparation
Branch
Ontario Training Adjustment Board
625 Church Street
3rd Floor
Toronto, Ontario
M4Y 2E8

(416) 326-5488
(416) 326-5505 (fax)

Michel Desmarais
Environnements informatises de
formation
Centre de recherche informatique de
Montreal
1801, avenue McGill College
Montreal (Quebec)
H3A2N4

(514) 398-1234
(514) 398-1244 (fax)

InterNET: DESMARAIS@CRIM.CA

Peter Goulding
COSY
George Brown College
P.O. Box 1015
Station B
Toronto, Ontario
M5T 2T9

(416) 944-4741
(416) 929-0334 (fax)

InterNET: goulding@gbc.gbrownc.on.ca

Pat Hoffman
Program Head, Academic/Employment
Preparation
SIAST
8th Avenue North Centre
P.O. Box 556
Regina, Saskatchewan
R4P 3A3

(306) 787-1676
(306) 787-4109 (fax)

Jean-Yves Desjardins
President
Federation canadienne pour
l'alphabetisation en francais
235, rue Montreal
Vanier (Ontario)
K1L 6C7

(613) 749-5333
(613) 749-6660 (fax)

Pat Hodgson
SARAW
1744 Fell Avenue
North Vancouver, British Columbia

(604) 988-5005
(604) 988-7014 (fax)

Lucie Hogue
Centre collegiale de formation a distance
College de Rosemont
Caisse postale 1000, Surcasale Rosemont
Montreal, (Quebec)
H1X 3M6

(514) 2864-4786
(514) 864-6400 (fax)

Richard Lawrence
YukonNET
809 Black Street
Whitehorse, Yukon
Y1A 2N9

(403) 668-7502 (home)
(403) 633-4196 (fax)

InterNET: richard@yknet.yk.ca

Pierre Nonnon
Faculte de L'Education
Universite de Montreal
C.P. 6128, Succursale A
Montreal (Quebec)
H3C 317

(514) 343-8088
(514) 343-7286 (fax) (506) 453-8230

Jean Roy
Coordonnateur des nouvelles
technologies
Direction des ressources didactiques
Ministere de l'education
600, rue Fullum, 8e
Montreal, (Quebec)
H2K 4L1

(514) 873-0028
(514) 864-1948 (fax)

Lino Mastriani
Coordonnateur
Services d'alphabetisation
Ministere de l'education
1035, rue de la Chevrotiere
Quebec (Quebec)
G1R 5A5

(418) 644-0220
(418) 643-0056 (fax)

Charles Ramsey
Chair
National Adult Literacy Database
P.O. Box 6000
470 York Street
Fredericton, New Brunswick
E3B 5H1

(506) 453-8230
(506) 444-4960 (fax)

InterNET:
ramseyc@nald.fanshawec.on.ca

Anna Stahmer
56 Castle Frank Road
Toronto, Ontario
M4W 2Z8

(416) 929-2297 (tel/fax)

InterNET: Compuserve 70324,1155

Audrey Thomas
Provincial Literacy Coordinator
Post Secondary Education Division
Ministry of Skills, Training and Labour
2nd Floor, 838 Fort Street
Victoria, British Columbia
V8V 1X4

(604) 387-6174
(604) 356-8851 (fax)

InterNET:
AMTHOMAS@GALAXY.GOV.BC.CA

Juel Weideman
Executive Director
Laubach Literacy of Canada
P.O. Box 298
Bedford, Quebec
JOJ 1A0

(514) 248-2898
(514) 248-7054 (fax)

FACILITATION

Carol MacLeod
Carol MacLeod and Associates
156 St. Patrick Street, Suite 5
Ottawa, Ontario
KIN 5J8

(613) 562-3938
(613) 562-3865 (fax)

Gladys Watson
Alpha Ontario
21 Park Road
Toronto, Ontario
M4W 2N1

(416) 397-5900
(416) 397-5915

Joyce White
Ottawa Board of Education
Continuing Education Centre
515 Cambridge Street South
Ottawa, Ontario
KIS 4H9

(613) 239-2720
(613) 239-2429 (fax)

HOST PARTNER

Linda Shohet
The Centre for Literacy
3040 Sherbrooke West
Montreal, Quebec
H3Z 1A4

(514) 931-8731 ext. 1411
(514) 931-5181 (fax)

InterNET: lshohet@dawsoncollege.gc.ca

**NATIONAL LITERACY SECRETARIAT
PARTICIPANTS**

Mr. James E. Page
Director General
National Literacy Secretariat
Human Resources Development Canada
15 Eddy Street
Ottawa, Ontario
KIA IK5

(819) 953-5460
(819) 953-8076 (fax)

InterNET: pagej@nald.fanshawec.on.ca

Ms. Marla Waltman Daschko
Senior Policy Officer
National Literacy Secretariat
Human Resources Development Canada
15 Eddy Street
Ottawa, Ontario
KIA IK5

(819) 953-5675
(819) 953-8076 (fax)

InterNET:
waltmanm@naldJanshawec.on.ca

Mr. Adrian Papanek
Policy and Program Officer
National Literacy Secretariat
Human Resources Development Canada
15 Eddy Street
Ottawa, Ontario
KIA IKS

(819) 953-5284
(819) 953-8076 (fax)

Ms. Louise Guertin
Director of Operations
National Literacy Secretariat
Human Resources Development Canada
15 Eddy Street
Ottawa, Ontario
KIA IK5

(819) 997-5713
(819) 953-8076 (fax)

Ms. Brigid Hayes
Program Consultant
National Literacy Secretariat
Human Resources Development Canada
15 Eddy Street
Ottawa, Ontario
KIA IK5

(819) 953-5568
(819) 953-8076 (fax)

InterNET:
hayesb@naldJanshawec.on.ca

X

**REVIEW OF NATIONAL LITERACY SECRETARIAT
PROJECTS:**

**Policy Conversation on New Technologies
and Literacy**

**Brigid Hayes
Program Consultant
National Literacy Secretariat**

REVIEW OF NLS PROJECTS

POLICY CONVERSATION ON NEW TECHNOLOGIES AND LITERACY

**BRIGID HAYES
PROGRAM CONSULTANT
NATIONAL LITERACY SECRETARIAT**

I wanted to provide you with a context about the National Literacy Secretariat, its activities and the activities with particular regards to what we're broadly calling new technologies. Please bear with us - we've been trying to encompass as much as possible without trying to narrow it down to the different funding streams.

Many of you around the table are familiar with the National Literacy Secretariat. Some of you are only familiar with us by reputation and by what you've read in the material we sent out in advance. We've been around since 1988. We are a program that strives to create partnerships; partnerships that will build a stronger commitment to literacy and help create a more literate Canada.

We work in partnership with provinces and territories and many of our provincial partners are with us today. We work in partnership with national voluntary organizations, with organizations not particularly dedicated to literacy - the John Howard Society, the YMCA - and we also work with business organizations and labour groups. Those partnerships are to help assist all of us to advance the literacy agenda.

There are five areas in which we are involved: public awareness, the development of learning materials, applied research; improving access and outreach to bring people into literacy programming or have literacy programs reach out to people; and finally information sharing and coordination, to bring people together with respect to infrastructure.

The NLS structure does not include a single strand of activity devoted to New Technologies. Rather it has, for the most part, been a response to a number of proposals brought to the table by our partners. What we have prepared for your benefit is a document called "New Technologies/Les nouvelles technologies". It's a list of everything we consider as related to new technologies. You will find that the description is in the language of the application.

The first five years of our program have been experimental. I think we've been able to encourage a great deal of activity, not necessarily organized, not necessarily under a framework or rubric, but still fairly important achievements.

I took a little bit of time to try to figure out what those lines of activities were because I think these lines of activities are also reflected around this conference table.

One area to which we have provided a lot of support is funding for literacy organizations and non-literacy organizations to experiment with the various computer assisted instructional packages in a variety of environments with different target groups. You will find labour unions using PLATO in fishing villages. You'll find the John Howard Society using Auto Skills with street kids in Ottawa. We've certainly have had experience - or encouraged people to have experience - with most of the major CAI's: CCC, Invest, Pathfinder, Auto Skills, Pals.

We've also assisted organizations to figure out how they could use the new technologies to draw in groups that they may not have normally targeted: aboriginal young people, the family and certainly, people with disabilities.. In fact, the representatives here from SARAW developed a project in which we have been involved. Again, this is a partnership project to develop programming for people with severe disabilities.

The next strand is the database communication support/infrastructure, where we have been a partner with the National Adult Literacy Database for about seven years now. We've been a partner with CoSy, Alpha Ontario, and Alphabase. We've worked with the Adult Literacy Contact Centre in B.C., which operates the hotline number and uses NALD as its source for information. We've also worked with the Alberta Association for Adult Literacy to try to figure out how they could better communicate among themselves, hold their meetings online and network together. So, there's that sort of infrastructure support to the literacy community and, as a public awareness, a way to respond to public awareness inquiries and to put tutors and learners together.

We've done some work with material development on-line on computer and with Ontario we have done some work with desktop publishing. We've also worked with people authoring their own learning materials, using Hypercard in B.C., and we've just now – I think over the last year or two - started to get into some CD-ROM multimedia efforts. These include the STAPLE Project, which is a multimedia practitioner training package, and also some projects with workplace literacy CD-ROM and video with bar codes so that people can stop the video at the right time in the program.

The final area we've been involved with has been in relation to the evaluation and review of software. Most of this has been anecdotal and descriptive. We've certainly not seen any major side-by-side evaluations of the systems; reviews have been far more descriptive of each existing system rather than critical reviews of software. We have not endorsed any particular approach or system.

There are a couple of other things to mention. The NLS is represented on several of the working groups supporting the Information Highway Advisory Committee. We've been trying to influence that process. Literacy is an important community and market; there are considerations which have to be made about learners when you're talking about the information highway. So, any report; we are quite hopeful, will address the concerns of adult literacy learners.

In conclusion, there has been a great deal of activity - fairly ad hoc, dependent for the great part on the strategy and the vision of the partner, as opposed to our own deliberate moves. That is a bit of an overview of where we are.