CANADIAN COUNCIL ON **LEARNING** CCL CCA CONSEIL CANADIEN SUR **L'APPRENTISSAGE**

# SURVEY OF FRENCH-LANGUAGE RESEARCH ON ADULT LEARNING IN CANADA: 1997–2007

## ADULT LEARNING
### KNOWLEDGE CENTRE

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in collaboration with the CDÉACF

**Disclaimer**

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The opinions and conclusions expressed in the document are those of the authors and do not necessarily reflect the views of the Adult Learning Knowledge Centre.

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# 1. Introduction

Since its inception, the Canadian Council on Learning's Adult Learning Knowledge Centre (AdLKC) has kept track of research on adult learning. It conducted an initial review of the status of research done in English in 2006, and a similar review of research done in French in 2007, the latter being entrusted to the *Centre de documentation sur l'éducation des adultes et la condition féminine* (CDÉACF) whose prior work on literacy training and literacy (Solar, Solar-Pelletier and Solar-Pelletier, 2006) was successful. In late September 2007, the CDÉACF submitted a research proposal aimed at determining the state of the situation from 1997 through 2007, supporting the process with documents from its own catalogue—more specifically, from two collections on adult education and training: the *Répertoire canadien des recherches en alphabétisation en français* (RÉCRAF), a directory of Canadian literacy research in French, and the *Répertoire sur l'éducation et la formation des adultes* (RÉFA) (a directory of adult education and training). This document database would then be enhanced with the documents catalogued in the National Adult Literacy Database (NALD). The objective was:

*"To inventory where French-language research on adult learning is occurring in Canada—adult learning being understood in the broadest sense as meaning adult education and training processes, outcomes, resources, methods and educational environments, as well as all pre-training (the request, the planning and the programming) and post-training (evaluation and impact) aspects."* [TR: translation]

On November 21, 2007, Dr. Kathleen Flanagan, AdLKC Coordinator, approved the proposal with the following changes pertaining to the method:

*"The method selected by the researchers is an inductive qualitative analysis, which does not identify themes. Rather, the evaluators recommend selecting a theme-based semi-open approach to better channel the team's efforts from the outset. Hence, an analytical framework should be established before the research is launched. Because it is such a well-known area of expertise, records classified by descriptors could easily determine the area of work given the researchers suggest adult-learning themes addressed in Canada."* [TR: translation]

The AdLKC also asked that data collection include the university theses in the three databases selected (RÉCRAF, RÉFA, NALD).

The work began in early 2008, led by researchers Claudie Solar, full professor at the Université de Montréal and Nicole Anne Tremblay, full professor, retired, also from the Université de Montréal. They received support from a steering committee formed by Rosalie Ndejuru, Executive Director, CDÉACF; Paul Bélanger, full professor, Université du Québec à Montréal and director of the Centre for Interdisciplinary Research and Development and Advanced Studies on Lifelong Learning (CIRDEP); and Martine Boucher, Coordinator, RÉCRAF.

Before the work could begin, it was essential to design an analytical grid, decide on appropriate computer tools, and develop a database for the French-language references on adult learning.

## 1.1.    Analytical Grid

As the AdLKC evaluation committee had recommended a theme-based semi-open approach, the researchers developed an analytical grid to classify the studies based on adult learning themes. The initial version was submitted to the steering committee in January 2008, and subsequently amended, taking into consideration comments provided. The updated grid was then forwarded to the AdLKC, along with the first progress report in January 2008 (see the grid at Appendix 1).

The grid is mainly based on the aspects of **learning**. The themes selected were reviewed and reorganized in accordance with Berbaum (1994), Danis and Tremblay (1985), Bélanger and Doray (2004), Tremblay (2003), and Taylor (2005). The exercise was repeated with respect to **adults**. Age breakdowns include various Statistics Canada categories (Grenier *et al.*, 2008); the list of specific client groups is based on the work of Solar (2005), Solar *et al.* (2006), and Solar and Kanouté (2007). The themes selected resulted in the two grid columns presented at the end of this document (learning types and client group), which are accompanied by the usual breakdown of learning categories (formal, non-formal and informal).


## 1.2.    Computer Tools

Before proceeding with the data analysis, computer tools also had to be identified. It was best to use a database program (such as FileMaker Pro), rather than a matrix (such as Excel). However, in either case, data needed to be transferred from the CDÉACF catalogue, which, given the range of data it covered, could have resulted in a loss of information.

It was therefore decided to consider the feasibility of using Academus, the CDÉACF's integrated document management software (with the assistance of François Dallaire). The two researchers were able to search the CDÉACF catalogue for documents and to discover this program, in terms of assessing its usefulness to the processing that would occur after the database development. Academus was installed on the researchers' workstations, but attempts to create a joint Web space to work on a common database proved unsatisfactory, connecting to the remote server took much too long. Hence, strategies were developed to allow integration of the data from both researchers which became possible through sustained coordination.


## 1.3.    Database

It was decided from the outset not to include documents focussing on the themes of work or health as these domains are already being handled by CCL's Work and Learning Knowledge Centre and the Health and Learning Knowledge Centre. This decision was discussed by the research steering committee and the AdLKC was informed when the progress report was submitted. The topics found in the English language summaries dealing with adult learning in Canada confirmed the relevance of this strategy.


To successfully build the database, it was necessary to:

- Identify which NALD documents to incorporate;
- Identify which ProQuest theses and memorandums to incorporate;
- Identify which CDÉACF documents to include with those of the RÉCRAF and RÉFA;
- Identify which RÉCRAF and RÉFA entries related to work and/or health to remove;
- Retain only those documents dated from 1997 through 2007, inclusively;
- Incorporate the new references into the database.

These tasks were verified several times to ensure that all CDÉACF-catalogued documents on adult learning research from 1997 on—especially all RÉFA literature—were included. An initial database of more than 350 entries was developed, and a systematic process was applied to each record in order to analyse the document against the analytical grid, and determine whether or not to retain it. The processing of bibliographic entries, together with the analysis and processing of the research, finally resulted in a new database containing 227 entries, upon which is based the present survey.

## 1.4.     Limitations of the Research

The time constraint was a real challenge for the research team. Researchers had three months to select database software, identify relevant documents, add new data from other sources, make appropriate selection and analyze the content in light of the analytical grid, process and summarize the data, and draft a report. In fact, preparing this synthesis was only possible through the use of meta-analysis, a method that retains only the most global data. Anyone wishing for more details, please refer to the relevant documents in the CDÉACF catalogue (www.cdeacf.ca).

The list of indexed studies proved to be another limitation. While conducting their work, both researchers observed that some documents were not part of the databases initially consulted. A follow-up will therefore be required at the CDÉACF in order to incorporate the missing information.

A third limitation pertains to documents that were unavailable at the time the survey was conducted; they were either in the process of being acquired (±10) or on loan at the time of processing (3)..

And finally, while Academus has the distinct advantage of providing access to all information from CDÉACF bibliographical entries, it also has the disadvantage of processing documents as a resource centre and not as research references. For example, a monograph, such as a book, is coded as one entry only, and the list of authors is coded in keeping with library code practices. This does not provide much access to individual chapters, and overlooks many details.

Despite these limitations, however, it is our opinion that the procedures adopted give a relatively accurate picture of the state of French-language research on adult learning in Canada. It may eventually be completed by more in-depth thematic surveys.

## 1.5.     Description of Document

This document is a survey of the state of French-language research on adult learning in Canada based on the 227 research data entries selected. These entries provide access either to documents easily accessible online or to print materials available from the CDÉACF.

Part two reports on an analysis of adult learning. It is structured according to the various categories in the grid used to classify the research. These are presented in descending order of occurrence. Part three, which is relatively short, provides a quantitative view of the research in question, in terms of populations studied and types of learning.

# 2. Learning

This section deals with identifying the direction research in the field of adult learning took from 1997 through 2007. Using the analytical grid, and in keeping with its main focus, each study was classified accordingly (e.g. under the heading "nature of adult learning", even if some parts touch on other aspects). The time available to conduct this synthesis restricted processing to this first level. However, once all research documents had been classified, we re-examined the headings with a high occurrence rate. This was true for the "Other" heading, which, after initial classification, included 44 entries—a number we found too high, given that this category accounted for roughly 20% of the cases. The second review of entries resulted in adding "Literacy" as a new heading. The next step consisted of analysing each heading and sub-heading and making some adjustments as required (ex. "Participation" and "Adult Education and Training Personnel").

In the end, the 227 French-language studies published in Canada from 1997 through 2007 and indexed in the CDÉACF catalogue were classified into 11 headings linked to adult learning. In the following sections, each theme is explored in a decreasing order, according to its importance, as shown in Table 1 and illustrated in Figure 1. This order is as follows: engineering, difficulties, nature of learning, literacy, strategies, participation, outcomes, resources, prior learning recognition (PLAR), content, and other references.

**Table 1 – Breakdown of Research by Heading**

| Heading | # | % |
|---|---|---|
| Engineering | 62 | 27.3% |
| Difficulties | 35 | 15.4% |
| Nature | 26 | 11.5% |
| Literacy | 24 | 10.6% |
| Strategies | 17 | 7.5% |
| Participation | 17 | 7.5% |
| Outcomes | 16 | 7.0% |
| Resources | 16 | 7.0% |
| PLAR | 7 | 3.1% |
| Content | 4 | 1.8% |
| Other | 3 | 1.3% |
| TOTAL | 227 | 100% |

**Figure 1 – Breakdown of Research by Heading (n = 227)**
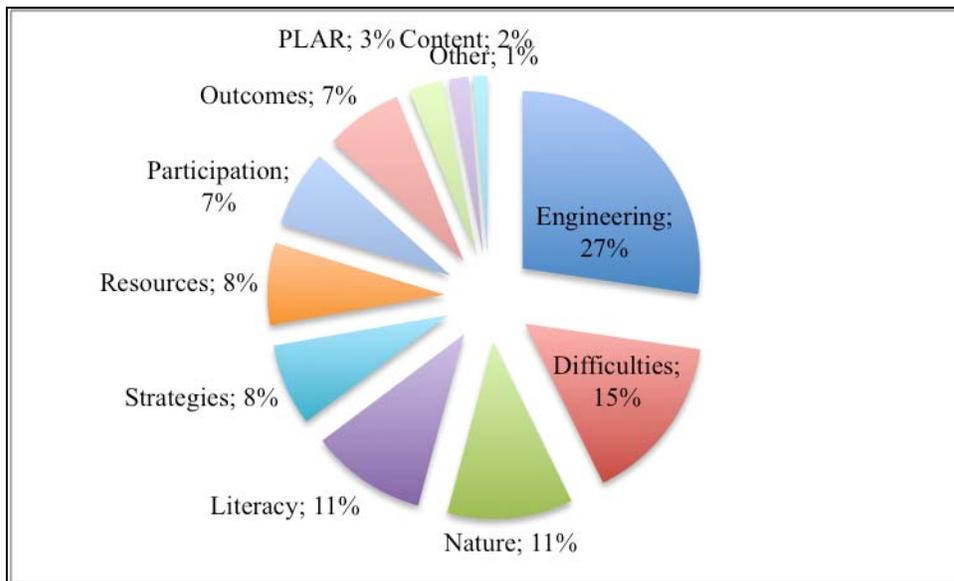


## 2.1.    Engineering

With its 62 research documents, the heading of "Engineering" is by far the most important; it has 27 entries more than the category that follows "Difficulties and Barriers" with 35. It represents 27% of the corpus studied. However, this is not surprising. First, the engineering of training is one of the basis of adult education and secondly, it covers a relatively broad field, extending from training needs, supply and demand through to learning assessments and program evaluation, as well as organization. It was decided against subdividing this theme, as it provided a general understanding of the aspects of engineering. Rather, it was decided the research documents for this category would be divided in the following subheadings: evaluation (30), technology (12), structures and policies (11), communication and other subjects (8), and comprehensive engineering research (1).

**Figure 2– Engineering and Related Sub-Headings**
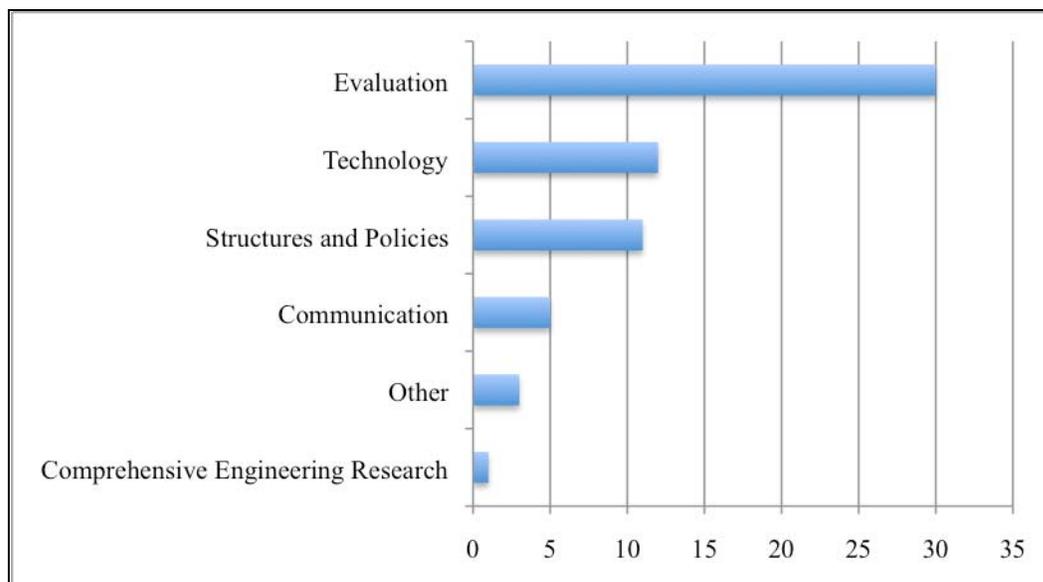
### 2.1.1. Evaluation

The "Evaluation" heading includes 30 entries, almost half (48%) of them all under the engineering banner. These studies comprise a number of different dimensions, with program and resource evaluation (18) being the most significant, followed by needs assessment which was combined with the demand (10), and learning assessments (2).

**Figure 3 – Evaluation and related elements**
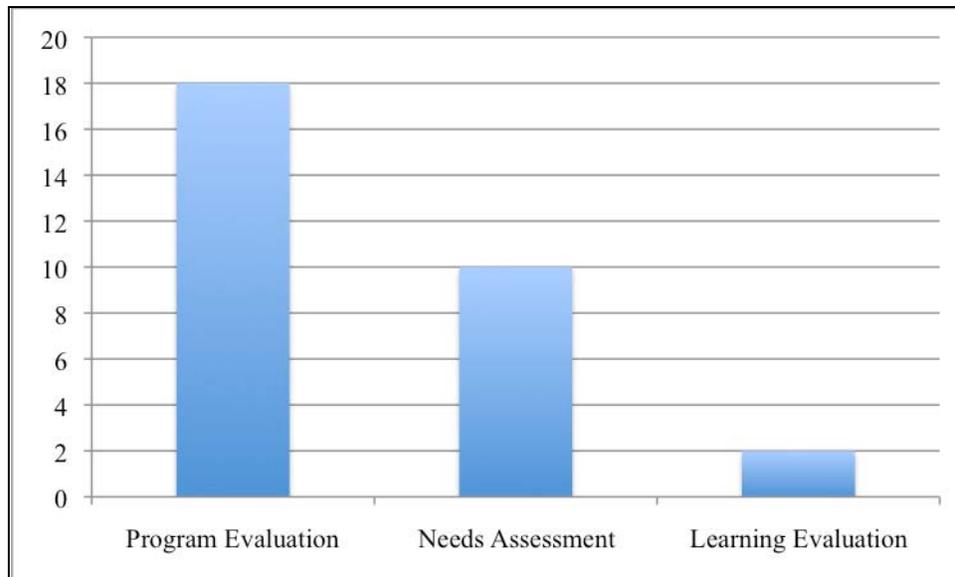


#### Program Evaluation

Program evaluation is the subject of many research activities. Our discussion begins with a study by Landal Inc. (2002), which was conducted in cooperation with New Brunswick's Provincial Partners in Literacy. The report first sets out the situation in the province. Literacy levels are worrisome, as they are below Canadian averages. Literacy skills for some 60% of adults are at the two lowest levels (1 and 2), as compared with 48% for Canada as a whole. New Brunswick Francophones bring up the rear when compared to Anglophones and Francophones in other provinces: 68% are at levels 1 and 2 (this last figure is 20% higher than the one for Anglophones in the province). The research shows that the community approach seems the most appropriate to meet the needs of adults, who feel welcomed and encouraged by the familiarity and flexibility of the learning environment. However, many irritants are preventing literacy-training programs from reaching their full potential. A long-term commitment to literacy training from the provincial government is required. Such a commitment could prove one of the best investments to be made in the province's future.

St-Pierre (2000) evaluated literacy-training programs offered by five community groups—*CÉDA*, *Tour de lire*, *COMQUAT*, *Centre de lecture et d'écriture* (*CLé) Montréal* and the *Centre de formation populaire*—in an attempt to measure the effects of community literacy-training activities as well as improve and establish a comprehensive evaluation process. Like the evaluations conducted in the community, these findings confirm an improvement in the literacy level of learners in reading, writing and numeracy. As for social skills, the author found that working as a group while in literacy training helps learners acquire listening and speaking skills, self-confidence, and a greater level of comfort within the group.

After 20 years of literacy training in Bégin, St-Charles de Bourget, Saint-Ambroise and Shipshaw, the *Regroupement des Centres d'alphabétisation Mot à Mot* also wanted to take stock of its efforts, examining the impact of its activities on participating adults. Perron (2003) conducted a study to assess the relevance of training in meeting the needs of less-educated individuals, the place occupied by the *Mot à Mot* centres in their community, and the efficiency of the means selected to raise awareness and recruit candidates in rural areas. With this evaluation, the *Regroupement* noted that adults who participate in activities are generally over 40; younger people are rarely seen in the centres. This explains, in part, the drop in participants. Nevertheless, there is an adequate level of satisfaction in regards to activities and the centres are all up-to-date in terms of ICTs. A review of practices, namely by establishing partnerships to promote the development of social skills, will undoubtedly improve recruiting, as word of mouth is still the most effective recruiting tool.

Vanier and St-Germain (1997) had an idea along the same line when they evaluated a pilot project on literacy training and social involvement that, over a period of two years, involving 96 guaranteed income security recipients from the Mauricie-Bois-Francs area in Quebec. The study also meant to determine how well the objectives of the project had been achieved by measuring short-term effects on participants and assessing the level of cooperation between the five community literacy groups and four *Centres Travail-Québec* (CTQs), work centres in Mauricie-Bois-Francs. The evaluation conducted on the learning achieved during the project indicated a significant and sustained increase of knowledge and skills in reading, writing, math and oral expression. Activities involving social interaction also seemed to yield significant results. Participants developed new networks of friends and acquaintances, new experiences, and gained new skills leading to self-empowerment, as well as greater independence.

Poirier and Leblanc (2001) conducted a study for the René-Lévesque School Board's adult education and vocational training department, focussing on the efficiency of literacy training in the Gaspé area where people with less than nine years of formal education have a literacy rate of 30%. Their findings show a very high level of satisfaction among adults, as well as some benefits in their lives, both personal and professional. In fact, a decrease of nearly 50% was noted amongst respondents who were social security dependents, and a 100% increase in the number of people who considered themselves "workers". While literacy and basic skills training did not bring about this success on its own, it certainly played a large part.

Deslauriers (2006) continued in this line of community program assessment, focussing on individuals participating in literacy groups designed to help adults take charge of their lives and gain independence. Assogba and Gagnon (2002) also examined needs for citizenship training on behalf of the *Centre Nouvel-Horizon*, an adult education centre established by the *Commission scolaire des Draveurs in Gatineau*. The issue addressed related to active and responsible citizenship amongst under-educated populations. The study aimed at updating objectives and practices in the area of citizenship education to encourage learner retention in that group. The concept of citizenship, as it applies, is defined in terms of access to education, personal involvement, social awareness and job readiness. The findings show, in particular, different points of view between adults and instructional staff. For example adults felt they were participating adequately in social activities, had access to information, and were well-aware of environmental issues. On the other hand, instructional staff believed all of these areas were lacking.

Also in regards to program assessments, but on a wider scale, Charest *et al.* (1999a) published a report entitled *Faire le point sur nos actions : bilan des initiatives fédérales-provinciales conjointes en matière d'alphabétisation 1993–1997* (an abridged version can be found in *Le Monde alphabétique* (Charest et al., 1999b). This research project, conducted by Quebec's research branch on behalf of the *Direction de la formation générale des adultes du Québec* (DFGA), the province's adult general education branch, presented an evaluation of projects funded by the Federal-Provincial Initiatives Concentrating in Literacy program (IFPCA) that dealt with 370 projects completed between 1993–1994 and 1996–1997,

by the two main training networks (the community literacy groups and the 306 school boards). It contains several observations and recommendations, and indications that little information is available on the results achieved by awareness and recruitment activities, although such data would be useful in understanding better the constant drop in enrolments in the school boards. The authors recommend emphasizing and expanding joint projects and partnerships with the community outside the two training networks, and ensuring that all projects are evaluated. Also, several high-quality publications, although extremely relevant, do not lend themselves to broad distribution because of their very specific nature. In fact, 25% to 30% of the works examined deserve more widespread distribution. The study suggests that the DFGA establish a database for projects so that these can be assessed each year to determine the relevance and effectiveness of the actions undertaken by the Federal-Provincial Initiatives Concentrating in Literacy program, and that certain corrective measures be made to the program, especially as regards to scheduling.

Another study is that of the First Steps Executive Committee, a community group which retained the services of Prospect Point Consulting Inc. (PPCI) (2004) to determine the feasibility and financial viability of creating a national electronic and telematic network for literacy in Canada in order to meet the communication and cooperation needs indicated by community literacy providers. This report represents a major step toward the creation of an electronic infrastructure for the country's literacy sector.

The education sector is also interested in adults undergoing training. This sector is particularly interested in assessing the path taken by adults enrolled in literacy programs in six Montreal Island school boards to identify the effects the literacy programs have on these individuals and assess sustainability. This proved to be true in both documents by Deniger and Roy (1998a, 1998b), one of which is a research report and the other, a summary report. D'Ortun (2006), however, focusses on general training for adults in the Outaouais region and examines the profiles, the needs and the priority actions in local school boards.

Other authors have focussed their research on adults with some disabilities. Dubuisson (2004), for example, evaluated a literacy training software program for deaf adults designed to promote learning for this group where literacy skills are particularly low. With an objective to improve their response, two Îles-de-la-Madeleine agencies—*Développement communautaire Unîle* and the *Centre d'éducation des adultes de la commission scolaire des Îles* (2007)—examined the needs for individuals suffering from mental illness when enrolling in training programs.

Also in Quebec, Lavoie, Lévesque, Roy and Shaw (2000), assessed a parenting skills program called *On découvre l'écrit, je t'aide pour la vie* in connection with what parents know and how competent they feel about their parenting skills. The evaluation also measured the effect of the program on the emerging writing skills of children whose parents had participated. The findings indicated the program had a significantly positive effect on parents' knowledge acquisition when their children begin to write. Training provided to instructors contributed significantly to the success of this project.

With respect to Francophones in a minority setting, two entries (Letouzé, 2006a, 2006b) deal with the two phases of a family literacy program impact study: stage 1, from 2004 to 2005, and stage 2, from 2005 to 2006. This study, conducted by the *Coalition francophone pour l'alphabétisation et la formation de base en Ontario*, highlighted the considerable positive impact of activities on parents and children. However, the report also observed that few parents with low-literacy levels participate in such activities and that the parent that is most often involved is the mother, and that instructors lack training in family literacy. On the other hand, the importance of French-language programs is undeniable to the vitality of Francophone communities.

## Needs Assessment

Several community groups have established the profile of their district or region to better meet the needs of adults, review the methods of response, or find new ways to recruit participants, as is the case for Duval (2002a, 2002b,) in the Grand Plateau (Montreal's *Centre de lecture et d'écriture*); Simard (1998), in Montreal's Villeray district (*Centre d'alphabétisation Le Jarnigoine*); Frej (2002) in Soulanges; the *Comité Alpha Papineau* (1997), in Buckingham's District 172; and Poisson (1998), in St-Henri and Petite-Bourgogne. The latest report places particular emphasis on the strengths of functional illiterates: sense of effort, interest in sharing, inventiveness, and the ability to develop a number of memorization techniques. Much along the same line, Wamke (1999) turned his attention to the literacy needs of Quebec's English-speaking population for recruiting purposes in the Quebec English-language school boards. This study shows that 12% of the Anglophone population has less than nine years of formal education compared to 18.5% for Francophones. The results of various analyses suggest that literacy services should be provided to meet the needs of regions rather than being centralized.

Two studies promote the approach based on demand: Voyer *et al.* (2004) and Bélanger *et al.* (2005), the second document representing a synthesis of the first. This comprehensive research meant to:

- Describe what brings adults to decide to study and how they cross the necessary steps in participating in adult education centres;

- Describe the strategies, practices and services used by school boards and adult education centres to ensure the promotion, awareness, facilitation, orientation and support for the training demand;

- Highlight the positive and negative aspects experienced by adults in their attempts to take part in literacy training;

- Promote the importance of supporting the demand for adult training with the administrative staff.

The purpose of the second program: *Formation à distance à l'intention des groupes de femmes* (FADAFEM), a distance learning-program for women, is to develop activities that meet the needs of women seeking literacy training or employment. To that end, Cadotte and Veer (2006) studied the profile of learning communities, resources and objectives against a backdrop of distance learning designed to allow learners to become motivated, confident, and independent, as well as to encourage self-empowerment and employment.

## Learning Assessment

The work by Baran, Bérubé, Roy and Salmon (2000) evolves around learning assessment. The focus of this study by Human Resources and Social Development Canada was to identify knowledge gaps in adult learning. Special attention was paid to adult learning outcomes and its return, to barriers and motivating factors of skills development; to the role and rate of informal skills acquisition. The authors recommend that these dimensions be further explored, as there is very little information on the subject. It should be noted that research from *Baran et al.* does not encompass the French-language studies, especially that involving unstructured learning. The work on self-directed learning conducted by the GRAAME (educational environment self-initiated learning research group) and GIRAT (interdisciplinary research group on independent study and work) teams would undoubtedly have bridged some of these gaps. The main studies deal with learning principles (Danis and Tremblay), metacognition (Danis and Tremblay; Hrimech), independent and self-directed learning tasks (Tremblay and Danis; Tremblay), and informal learning strategies (Hrimech).

Also on this same sub-theme, the study by Campbell (2006) is worthy of mention. It was conducted to offset the lack of information on evaluation tools and practices used by educators who teach adults in Canada. It should also be noted that there is little research on the supports

or the constraints which have an impact on these individuals' abitlity to use effective evaluation practices. Campbell's pan-Canadian survey was conducted in English only and contacted 380 people in Anglophone communities in 2005 by means of an online questionnaire. Respondents were mainly mature, female, well-educated program coordinators. The findings show that 26 different commercial tools are used mainly to assess literacy and numeracy skills, as well as essential skills. Of these, only three have been upgraded over the past ten years for use with Canada's adult population. This implies that practitioners have little choice if they wish to use an up-to-date test with Canadian content suitable for an adult population. It is unfortunate that so little data is available on the evaluation tools used in the Francophone community; much remains to be discovered in this regard.

### 2.1.2. Technology

The study by Dubuisson (2004) on evaluating a software program for the hearing-impaired, informed on the use of technology in the field of education and adult training. Among the 32 other documents classified under the "Engineering" heading, 12 pertain to information and communications technologies (ICTs), more specifically their use in training and distance learning activities.

A major research project (Samuel, 2005) was published by DIVA (*Développement, intégration et évaluation des technologies de formation et d'apprentissage*). DIVA—which brings together researchers from four large Quebec organizations— was formed to create high-level research synergy and design models, methods and training tools using technology. Members of DIVA include CIRTA (*Centre de recherche interuniversitaire sur les technologies d'apprentissage*), GRITI (*Groupe de recherche interuniversitaire en tutoriels intelligents*), GTFA (*Groupe sur les Technologies de Formation et d'Apprentissage*) and CSLP (Centre for Study of Learning and Performance). The issue is covered in the book's 21 chapters which are divided into sections on learning objects and the Internet; collaborative systems and emotions; virtual laboratories and experimental environments; and learner support systems. This work presents the latest data on technological training engineering.

Another survey, conducted for Contact North by Knight (1999) and translated into French, discusses the dimensions required to ensure successful technology-based learning. For example, instructors need proper training, new roles of institutions must be defined; one must see what programs exist elsewhere, and must ensure the availability of required technical support. This research is based on various sources, both human and physical, in Canada and abroad, specifically in English-speaking countries (United States, New Zealand, Wales). The author stresses the need for a superior cognitive skills for students (problem-solving, research, evaluation using multiple criteria, speculation and prediction, complex thinking).

A thesis by Ruelland (2000) aims at providing a reference framework for the design of computerized self-management aids for adults in continuing education programs, in school or at work. This study looks at an operational model of the self-management process. The model was constructed via *Learner Verification and Revision* (LVR), which includes four phases: problem analysis, self-management knowledge modelling, creation of self-management aid resources, and field tests. Ruelland's study allowed him to identify approaches that could apply indiscriminately to distance-learning fields that are usually dealt with separately: distance learning, collaborative network-based learning, and learning in a multimedia-information research environment. Particular emphasis is placed on three general skills: knowing how to make decisions (cognitive domain), being able to make choices (affective domain), and knowing how to communicate with peers and instructors (social domain). In short, the research data illustrate the need for self-management, and confirm the relevance of developing computer tools to support self-management processes in a distance learning context. The data also confirm the existence of various self-management approaches used in distance learning, and highlight skills considered to be new for most subjects interviewed.

ICTs are also used in distance learning. Bernatchez, Loisier and Marchand (1997) analyzed learning environments that foster an integrated system using multimedia instruction for training via the Internet. Coulombe and Désilets (2006) were interested in developing a hybrid approach for literacy distance learning (i.e. combining classroom and distance learning). The guidelines and favourable conditions for implementing such an approach are also described.

The goal of Gérin-Lajoie and Wilson's work (1999) was to examine the use of learning technologies and their pedagogical applications in the area of distance learning, for the specific purpose of professional development for a group of instructors.

This analysis is based on a series of workshops that were provided by the *Réseau d'enseignement francophone à distance du Canada* (REFAD) in 1998–1999. The research team took particular interest in the following three topics: (1) the effectiveness of learning technologies in an educational environment; (2) the pedagogical applications related to the use of those technologies; and (3) the transfer of the learning technologies to the workplace, based on workshop-acquired knowledge. For these authors, the research confirmed that distance learning represents an ideal way to reach isolated populations such as Francophones in Canada, and improve their access to knowledge.

Also in relation to distance learning, Saucier (2003) analyzed enrolment in school boards in partnership with the *Société de formation à distance des commissions scolaires du Québec* (SOFAD). Using the data provided by the *Système d'information sur le financement des effectifs scolaires adultes en formation générale* (SIFCA), the report is the seventh annual review of enrolments since the school boards began distance learning services. The data relate to enrolments for general training, community education, and vocational distance learning from July 1, 2001 to June 30, 2002.

To capture the title of the book *Au coeur des pédagogies* by Karsenti and Larose (2001), ICTs are increasingly becoming the focal point of education. The authors focus on ICTs in university teaching, and throughout various chapters they examine aspects such as the practices and research findings. They also provide some insights on how to integrate these aspects as well as their benefits to education. While this work is focussed on university pedagogy, another (Karsenti and Larose, 2005) examines the integration of ICTs into teaching. It explores mainly initial training and ongoing professional development for teachers, with a number of chapters covering the role of computer technologies in teaching and the impact of ICTs for future teachers. Although most of the research is related to Quebec, there are also data on CREATIC.ca for Francophones in New Brunswick. The question of gender was also addressed in another chapter.

In a PowerPoint presentation, Karsenti (2003) discusses experiments aimed at optimizing the use of e-mail, forums, and chat rooms as pedagogical and didactic tools. The findings were taken from an analysis of 40 chat-room conversations and some 5,000 e-mail exchanges. The survey focussed on both the opportunities offered by the use of these communication methods and the pitfalls to be avoided.

Hackett (2006) discusses *ICTs in Quebec's French-language literacy agencies,* and studies the situation in terms of equipment, use and needs, which allows him to conclude that a vast majority of francophone literacy organizations are now computerized and can no longer do without ICTs. In 2007, Hackett continued his work on informatics and the Internet *in Quebec's French-language literacy-training agencies.* This active research attempted to establish an outlook for the future. Technology has become essential in literacy training. The agencies in question have an average of 10 computers, most with Internet access (eight of which are placed at the disposal of learners); however, 63% feel their equipment is outdated or too slow. Three-quarters have integrated computer technology and the Internet into their workshops using various means. Their motivation for doing so fits well within the community literacy approach: given that ICTs are part of today's society, not learning how to use a computer

would amount to perpetuating the exclusion factors experienced by adults with low levels of schooling.

### 2.1.3. Structures and Policies

Other studies (11) have focussed mostly on framework or policies. For example, Solar (2001) examined developments in adult education in Quebec over the past 15 years, while Doray, Landry and Tremblay (2000) focussed on specific suitable agenda for occupational training. These changes were well underway before the reform initiated by the *Commission des États généraux du Québec (1995–1996).* Illustrations of the self-empowerment of this sector (especially via the use and added value of its own special pedagogical practices) include orientation courses and cooperative education.

Within the school system, Wagner and Turgeon (1999) tracked developments within Quebec's adult education sector since the 1960s, when school boards were responsible for basic adult education. Since then, two opposing trends have created tensions within the school system: the need to recognize the specific needs of adults as well as the particular response by instructors, and the need to incorporate adult education into the traditional sector (i.e., that of young people). The analysis highlighted the phenomenon by which adult education—through human resource management, the discounting of the specific requirements of adult education, and a monolithic approach to teacher and instructor training—has come to be synonymous with academic attainment. In fact, the authors conclude that educational achievement is reduced to school success which, in their view, contravenes the theory of continuing education and lifelong learning.

Similarly, Tremblay and Doray (2000) tracked the developments occurring in occupational training in Quebec. This compendium of studies and working papers from the world's Francophone community features six chapters by Quebec authors. In this context, it is impossible to conduct a comprehensive synthesis. However, the main challenge remains integrating youth and adults into occupational training. Current enrolments consist of one youth for every 2 adults. Close attention must therefore be taken to prevent adult education from becoming an overflow for students with learning disabilities. Different teaching methods must be adapted for youth and adults. The issue of short-term training was also examined and was not proven to be very successful in qualifying participants for the labour market. The studies conclude that concerted efforts are required among all stakeholders—government, institutional and corporate. Balleux (2000a), for his part, re-examined the changing environment of apprenticeship programs within the occupational training system, where practices and new opportunities are explored.

Bessette (2005) focussed her research on the organization and operation of two adult education centres. She examined the characteristics of adult learners, their limitations and the difficulties experienced in the centres, the unavailability of educational support services, and the various strategies used by stakeholders to meet the learners' needs. The adults—under-educated and excluded from the job market—were urban, multi-ethnic newcomers to Quebec. The findings show that the strategies used by adult education staff were linked to their duties and job descriptions. A major concern was recruiting and retaining clients. Given the working conditions and employment uncertainty, teachers use survival strategies and are aware of following the curriculum too closely and neglecting other aspects of adult learners' needs. Very few stakeholders had training in andragogy, and professional development days offered few opportunities for upgrading from an organizational perspective.

The study also showed how difficult it is to apply andragogical principles given the increasing younger client-base. The relevance of this approach is therefore being reviewed. The author proposed additional research to identify: a new funding formula for adult education to meet the needs of young clients; provide initial training and continuing education for adult education teachers; and examine teaching conditions for adult training centres that use individualized instruction and survival strategies

A final inquiry on vocational training was conducted by Savary (2003) for the *Table de concertation en éducation des adultes et en formation professionnelle des commissions scolaires du Quebec* (TRÉAQFP). This followed the Quebec *Government Policy on Adult Education and Continuing Education and Training*, which suggested a partnership-based approach involving various stakeholders, both local and regional, in order to optimize resources. The study's objective was to analyze established joint-action structures, identify the conditions for success of the practices in question, and make recommendations to promote such conditions. According to the data collected, joint action could include developing a comprehensive vision that transcends the mission of each partner, mobilizing the individuals concerned, and defining clear objectives for projects to be completed within reasonably short timelines.

A similar call for joint action was issued by Gobeil (2003) during that same period, in a notice from the *Conseil supérieur de l'éducation du Quebec.* He recommended that institutions become proactive in developing partnerships with the adult education community; Emploi-Québec, local employment centres (LECs) and area educational institutions. Particular emphasis was placed on the fact that supply and demand in adult education serves local and regional development in partnership with these institutions. According to the Policy, the mission of adult education is to focus on active citizenship, taking into account the educational needs of clients by providing greater access to knowledge and culture. The work of Savary (2003), discussed above, came to the same conclusions.

The collective work edited by Hautecoeur (2000) examined adult education and training policies, discussing papers drafted for the International Seminar on Adult Education and Lifelong Education Policies in Industrialized Countries held in 1999. The Quebec texts deal with a variety of subjects: Bélanger explored the new adult education and training policy context; Bourgeault and Pageau, expression of demand and prior learning recognition; Miller, businesses as learning and training venues; Bérubé, the organization of adult education and training in Quebec; Lemelin, the economics of education and adult training; and Ollivier and Wagner, the reconstruction of adult education.

Already in 1998, Wagner provided the Canadian Commission for UNESCO with a report entitled *États des lieux.* The document which addressed Canada and Francophones also highlighted the concepts and ultimate goals of literacy training and adult basic education, as well as the policies and mechanisms established in New Brunswick, Ontario and Quebec. This section also lists the Canadian resources for literacy research (National Literacy Secretariat, *Fédération canadienne pour l'alphabétisation en français*, National Adult Literacy Database) as well as the main publications in this area. The international cooperation aspect is also mentioned.

The main conclusions: 3,650,000 Francophone Canadians do not possess the basic skills required to read and understand society's common print material.

We face several challenges. We must reach these individuals and redefine literacy training on the basis of self-esteem to meet personal, social, cultural and occupational skills. Increasing awareness of the Francophone perspective, as well as the attitudes toward research is essential. Finally, we must establish concerted efforts with all stakeholders to ensure effective policies.

Hoddinott (1998) also conducted an environmental scan on basic education. As a follow-up to preliminary research conducted in 1996, this pan-Canadian study entitled *Répondre à un besoin manifeste : Document de travail sur l'alphabétisation des adultes au Canada* consisted of an in-depth examination of adult literacy and basic skills (LBS) methods and policies. The main goal was to determine to what extent existing government LBS policies enable adults with poor schooling to improve their literacy level. Overall, the study highlights the gaps in existing adult LBS and confirms the need for an in-depth review of policies and practices. Hoddinott also examined the teaching staff stressing the significant differences in levels of qualifications,

skills and commitment. The working conditions are relatively poor and deteriorating and support for services is greatly lacking, and remain underdeveloped. Furthermore, LBS services in certain provinces are extremely fragile, and tend to collapse in many areas. The report shows that all the provinces and territories definitely have a long way to go before they can claim universal access to LBS services.

### 2.1.4. Communications and Other Subjects

Eight other studies deal with communication (5) and other subjects (3).

#### Communications Research

Five studies deal with communications. Three studies discuss simplifying documents for the general public, and involve the government's plain-language project. In all three cases, the work was performed by the *Rédiger* group of the Université Laval—a group founded in 1997 with a mission to identify barriers to reading comprehension and develop techniques that promote effective written communication. Clerc, Kavanagh and Lesage (2004) analyzed administrative letters; Desbiens and Kavanagh (2995) focussed on administrative e-mails; and Bisaillon *et al.* (Groupe Rédiger, 2002) examined communicational effectiveness of the Quebec government's print and electronic forms, as well as backgrounders contained in the *Répertoire des programmes et services* administered by Communication Québec.

In accordance with the classification established by the International Adult Literacy Survey (IALS), plain language techniques target primarily readers at Level 2 and 3, who represent respectively, 26% and 39% of the population. While readers at Levels 4 and 5 benefit equally from simplifying documents, those at Level 1 (the lowest level) do not have the skills to understand written documentation.

Trudeau's Master's thesis (2003) focussed on the issue of simplifying government and corporate documents to meet the population's literacy levels. Her findings, based on five recent research papers, show that plain, simple language style guides are effective only if they contain advice on both readability (visual and linguistic aspects) and intelligibility (information, structure and content). Her findings confirmed the assumption that in such styles guides, on readability is considered much more important than intelligibility. Tremblay's Master's thesis (1999) dealt with a completely different topic: that of empathy in teaching, considered from the standpoint of a communication model able to facilitate interpersonal exchanges. The research highlighted four strategies for showing empathy in an educational environment: establishing contact with students in a receptive, open manner; stepping into their shoes as learners; and stressing the quality of each student, as well as the specific dynamics of the group of learners. Some tools and methods are provided to put these strategies into action: a clear, detailed course outline, the use of a communication binder, and the facilitation of discussion periods and three verbal communication techniques (paraphrasing, self-discovery and discovery of others, and meta-communication), as well as some non-verbal communication techniques.

#### Other Subjects

Three other references deal with different subjects. The collective work written by Lafortune, Deaudelin, Doudin and Martin (2001) presents data on different continuing education practices among teachers in the Quebec school system, as well as Switzerland's. The chapters on Quebec discuss the methods of continuing education (Solar); the emerging needs of lifelong learning such as coaching (Lafortune, Deaudelin and Deslandes), the cooperation between school, family and community (Deslandes); training for administrators (St-Pierre); insight about practices in the field of continuing education (Savoie-Zajc and Dionne); and links between initial training and continuing education (Boutet; Landreville).

A special issue of *Recherches féministes* entitled *Passages,* by Bouchard (2005), included a number of articles examining gender issues, such as few female philosophy professors and equal opportunity teacher training. The article by Beauregard and Solar recounted the history

and activity of the RQCF—the Quebec feminist researchers' network—that facilitated dialogue, knowledge exchange and cooperation, mostly at the university level. Several studies have resulted from these discussions.

The last document by Mercier (2004) is a collection of documents presented in May 2003 at the ACFAS conference on the adult general education (AGE) curriculum. The chapters discuss the historical, political and theoretical bases of the AGE program, which was officially approved in 2007 and will become mandatory in Quebec school boards as of 2008–2009. Following the general introduction by Mercier, Director of the *Direction de la formation générale des adultes*, the eight other chapters deal with different aspects of the program. Included is an initial survey of the *Government Policy on Adult Education and Continuing Education and Training* (Mercier), which discusses educational issues that arise from curriculum development (Bouchard); the innovative aspects of this curriculum (Medzo and Ettayebi); problems encountered when using the concept of skills in curricula development (Jonnaert and Masciotra); the development of civic and cultural skills in adults (Baril); learning transfers in real situations (Chouinard and Ettayebi); recognition of extracurricular prior learning (Leduc); and recognition of prior learning for non-graduates (Bélisle).

### 2.1.5. Comprehensive Engineering Research

A special mention is attributed to Vallières' research. Completed during his master's degree in 1998, the study describes the steps of educational engineering associated with literacy training for middle-aged and senior individuals. It introduced the theory to clarify the concepts of literacy, both the notion and the training, as they applied to independent seniors. An analysis of their needs was conducted, individual and group activities were developed and implemented and results were assessed. This study reveals some of the issues related to low literacy skills including loneliness among individuals for whom talking of low levels of literacy is still frowned upon; hence the difficulty of reaching out to them. Female seniors (researchers and co-researchers) expressed some of the needs required such as intellectual activities to maintain or enhance cognitive capabilities. They also expressed the need for exchange in services that would allow them to share their skills with other residents. They indicated the need to exercise and stimulate their memory skills in order to maintain their independence. These needs, a constant concern from the beginning to the end of the project, were met through various activities such as exchanges on materials read, crossword puzzle exercises, contributing material for the newsletter, and the exchange of memorization strategies, etc. The results of these activities are conclusive: new words are learned, the ability to use a dictionary is enhanced, and intellectual activity become fun. These activities also have positive repercussions, as they enabled several seniors to break out of their isolation and enhance their self-esteem.


**To summarize this section,** there are 62 references under the theme of "Engineering", almost half of which (30) deal with the assessment of programs, needs and learning. To some extent, this aspect of engineering is well covered: the adult clienteles are known, and detailed profiles have been developed to meet the needs of adults, especially those with low educational levels. The demand is now the angle that should be examined, since structures and policies (10) have not yet successfully managed to address that aspect. Organizations must learn to shift from an offer model to that of demand. Community groups and literacy centres will certainly be able to make that transition. Given that they have a greater contact with adults, they can adapt to change more easily, and are less likely to remind clients of their past learning experiences.

ICTs occupy an increasingly important position in the engineering of learning. As reflected by the 12 specific studies, they are now integrated in teaching techniques. It is an extremely prolific field in terms of research. Synthesis reviews as well as other comprehensive research are now being published. These facilitate conceptualizing even though software for specific clients and learning contexts have not yet been developed.

Finally, the *Rédiger* group expressed the need for plain, simple language in the area of adult education to facilitate communications with the general public.

## 2.2. Learning Difficulties, Barriers and Experiences

The section on learning difficulties and barriers explores different aspects and presents 35 bibliographic entries. In decreasing order of occurrence, eight (8) deal with barriers to participation for the least educated; eight (8) others explore the difficulties experienced by learners; seven (7) deal with the issue of dropping-out; seven (7) others focus on learning experiences; and five (5) discuss learning difficulties.

**Figure 4 – Difficulties and Related Sub-Headings**
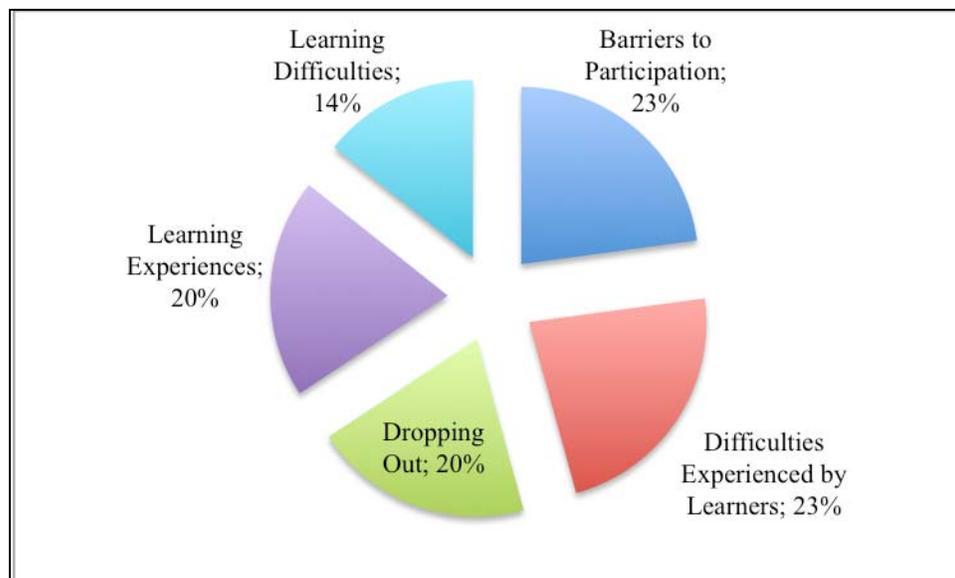


### 2.2.1. Barriers to Participation among the Poorly-Educated

The studies reveal a broad consensus on the types of characteristics why the poorly-educated or illiterate population do not participate in activities. Some of these characteristics include: failure at school; rejected socially and/or extremely marginalized; and prefer to hide their condition (PFG Consultants Inc., 1997; Gauthier-Frohlick, 1997; Lavoie, Lévesque, Aubin-Horth, Roy and Roy, 2004a; Lavoie *et al.*, 2004b). These individuals have difficulty performing everyday tasks such as grocery shopping, using ATMs (automated teller machines), making purchases at drugstores, and completing forms, especially when applying for jobs (Duby and Hudon-Morales, 2006).

Reasons for non-participation are usually personal and are mostly related to a lack of financial resources, information, or accessibility (*Commission scolaire René-Lévesque*, 2000). Other external factors for not participating include: the lack of access to community resources, vulnerable individuals being immediately rejected for jobs due to competitive standards, and the lack of mechanisms available for these individuals to services designed for them (Lavoie *et al.*, 2004a; Duby and Hudon-Morales, 2006).

It is very interesting to note the obvious consensus in the studies mentioned above, especially when one considers that these six studies relate to Quebec and Ontario. As such, these barriers characterize any adult with a low educational level from either a majority or minority community setting. When in a minority, however, barriers can be greater, and involve specifics such as accessing literacy programs in one's mother tongue, in this case French, (Gauthier-Frohlick, 1997), or a greater difficulty in establishing trust between individuals with

low literacy skills and the recruiting staff—as we know, a vital aspect of participation in literacy-training activities (PFG Consultants Inc., 1997).

Two additional studies were conducted: one by Tardif (2004) and the other by Shalla and Schellenberg (1998). The first study attempted to determine why some adults, upon completing literacy training, manage to re-enter the job market while others do not. Tardif (2004) identified a number of internal factors: extreme childhood poverty, the degree of literacy, stigmas, lack of social ties, decline of family capital, the burden of household duties, family responsibilities, and personal resources. External factors such as a job market where productivity demands and pressure exclude people with social handicaps and the lack of recognition for civic activities were also identified. Shalla and Schellenberg (1998) attempt a more in-depth exploration of the links between literacy and social and economic conditions, with a view to collecting useful observations that will help shape the government's social security policies. Their findings show that reading abilities have an effect on the status of individuals with respect to job-market participation, salaries, and the risk of becoming economically disadvantaged. This last study ends with a discussion of learning difficulties related to reading and writing.

### 2.2.2. Difficulties Experienced by Learners

Three studies looked at specific difficulties of certain client groups. Boucher (1999) focussed on young adults from Montreal's South-Centre district, where poverty is glaring and social distress, acute. There is a new profile of young people who have attended school, but have low literacy skills. Contrary to their elders, they have experienced failure at school, which has had a considerable effect on their self-esteem. These young people are afflicted not only with literacy problems but also with substance abuse, prostitution and AIDS. According to the author, literacy programs are a logical step for these young adults who are reluctant to go back to school as they know it. Doucet and Nolin (2002) were also interested in learning more about men with learning difficulties, and showed that Kohs' blocks (1923), a tool to examine cognitive functions, were efficient at predicting the learning capacity of these individuals.

Another study conducted with allophone adult immigrants at the *Centre haïtien d'animation et d'intervention sociale* (El Bina and Bessette, 2006) acknowledged the difficulties of increasing French-language literacy for Creole-speaking individuals. Hence, guidelines are proposed to ensure follow-up to the training. The data supports the language aspects of literacy training as highlighted in the section on engineering.

As well, regardless of their level of literacy, these adults are often parents, and specific characteristics set these disadvantaged parents of preschool-aged children apart, as revealed in four studies. The first, by Drolet*,* Legros, Roy and Chabot (2000), was conducted in partnership with a literacy group, an elementary school and a family services group. Two others (Kanouté, Hohl, Hadiri, Borvil, Lavoie and Ulysse, 2003; Filion and Fillion, 2003) explored the problems of academic coaching. These three studies speak to the need for realistic collaboration between the school and poorly-educated parents or those whose first language is not French. While help with homework is underlined, the impossibility of some well-intentioned parents to collaborate is also underlined.

Research by Couture, Lavoie, Lévesque and Roy (1998) reports on an experimental skills-development program for parents with poor reading and writing skills who had preschoolers (children three or four years old) learning how to write. Findings indicate that developing activities and programs for adults to overcome such difficulties is possible.

Exploring another situation in her Master's thesis, Steff (2002) examined how four adults with severe or profound mental deficiencies learned problematic motor tasks aiming to facilitate their integration in the community. It concludes that there is currently no reference model for this type of learning, no doubt because each subject is unique.

### 2.2.3. Dropping-Out

The direct impact of certain socio-demographic factors (such as parents' education level, income, and school enrolments of young adults 16 to 25) is revealed in two studies by Willms (1997 and 1999). Supporting these studies, Bushnik (2003) examines the impact of work hours on learning among 18- to 20-year old high-school students on the risks of dropping-out and the likelihood of eventually "dropping back in", if they have not already done so. Surprisingly enough, he concludes that not working at all or working more than 30 hours a week, as opposed to working less than 20 hours per week, increases the risks of dropping-out. The author concludes that working as well as going to school still leaves a lot to explain.

Young drop-outs are the subject of two other studies. Veltri and Van Winckel (1999) examined the factors why Francophones aged 16 to 24 drop out in the Peel region of Ontario, noting that 20% of them would rather work than go to school, and that these students are simply bored at school (despite A or B averages for 30% of the students when they choose to quit). The profile of most at risk students corresponds to that referenced in documents—i.e., they have one or more disabilities, a complicated marital or family situation, and live in uncertain economic circumstances. A parent or a friend not believing a high-school diploma important also increases the risk of dropping out. Richard, Beaulieu, Lacroix and Boutin (1998) conducted similar research, theirs dealing with high-school students' needs for literacy training and those of Francophone dropouts aged 16 to 24 in northwestern Ontario. The majority of the respondents aged 15 to 25 (93 males and 79 females) were native of Ontario; had no children; were still living with their parents; were unemployed; and some were on social assistance. A quarter of respondents admitted that their reading and writing difficulties prevented them from finding a job while others experienced problems in their everyday life.

College and university drop-outs are further examined in an issue of the *Revue trimestrielle de l'éducation* (2000). It highlights that often Canadian institutions are of a "commuter-in" nature, as on-campus housing is not always available and students sometimes spend considerable time commuting; this being particularly difficult for those living further out. Also discussed in this issue is a drop-out rate sometimes 50 times higher for students whose parents did not complete high school. Drug abuse in high school, dependent children, failure at the elementary school level, and the lack of friends or family with the same ideals are other predisposing factors for drop-outs.

Distance learning is not spared its share of drop-outs as evidenced in a Statistics Canada study (1998). The socio-economic profile of these students reveals they have lower income, less work experience, and a lower level of education. They are most often married (61%), earning less than $50,000 (57%), and even unemployed (78%). More women than men (57-43) are found in all age groups. At 7 on a scale of 8, the drop-out rate is higher for distance learning than for class-room instruction. According to the study, this figure would decline to 3 if group meetings or traditional education strategies were added.

### 2.2.4. The Learning Experience

Four studies conducted at the Université Laval by the Centre de recherche interuniversitaire sur l'éducation et la vie au travail (CRIEVAT), a centre for inter-university research on education and life at work, was placed under this theme. Signs of burnout and disillusionment while studying were the focus of this research. More specifically, the research tries to understand how barriers to the job market and conditions associated with being a student, affect the relationship between students and their education as well as students among themselves. These studies were conducted with students in physical education (Leclerc, Gagnon and Bédard, 2000), communication (Leclerc, Gagnon and Bédard, 2001), French literature (Le Blond, Leclerc and Bédard, 2001), and the plastic arts (Leclerc, Le Blond and Bédard, 2000). The main findings indicate that the greatest frustrations for students in these programs are the decline in course offerings as a direct result of budget cuts. The authors also bring to light the difficulties associated not only with learning self-discipline, but also reconciling

the realities of the profession on the job market with academic knowledge acquired. Literature and plastic arts students reported that it was often difficult to set aside their personal feelings in order to tackle creativity from a more analytic point of view.

The learning experience is also the focus of Couture (1997)'s Master's thesis, but of candidates said to be of low literacy. She examines the meaning these individuals give to their life's experiences, which looking beyond the habitual community and family-associated findings. The life accounts of seven men and women between the ages of 17 and 56 reveal that major difficulties in school are experienced right from the beginning, and that these illiterate individuals are painfully reminded of their shortcomings everytime they need to read or write. They have been experiencing, since childhood, daily situations that reinforce their feelings of marginalization, humiliation and powerlessness. Given their current lives, they regret not having learned how to master all the skills associated with literacy. It is at their work that, for the first time, these subjects felt competent, equal to others and worthwhile. Job searching, however, is an agonizing, stressful and humiliating situation where they must invariably admit to their literacy shortcomings. Some of the individuals with low reading and writing skills chose to enrol in literacy training. Their motivation is real: they need to be more independent, to help their children with homework, and to eliminate social isolation, among others. One-on-one instruction, respect, attention, trust and encouragement all contributed to their feeling of effectiveness, as well as helping them feel more confident and valuable. Gradually, their negative perceptions of school went away to be replaced with a certain level of proficiency that gave rise to greater freedom.

From an occupational training perspective, Savoie-Zajc and Dolbec (2003) approached both male and female adult students in two traditionally male trades (auto mechanics, pulp and paper) and one female occupation (secretarial and accounting work) in the Outaouais area. The three programs are offered, respectively, using a classic approach, a cooperative approach, and a modular approach. The main challenge is linked to financial difficulties (also the most important reason for dropping out). Women spoke more freely about their academic difficulties, and report being under more pressure than men. In order of importance, barriers to success include: financial difficulties; family problems; lack of time; transportation issues; learning difficulties; lack of support from family and friends; a program more complicated than anticipated; interpersonal problems with teaching staff; and interpersonal problems with other students. As for student demands, greater recognition for prior learning, customized English instruction, software transfers between home and school, more female professors, and manuals adapted to courses and content are the more common.

Lastly, Pageau and Bujold (2000) analyzed data from ICOPE (indicators on the conditions for student retention) surveys to describe student characteristics and their link to chosen educational paths. The study attempted to determine whether these characteristics have an effect on perseverance leading to an undergraduate degree from a Quebec university. The analysis of the differences between full-time and part-time students constitutes the basis of the findings. The latter are older, have parents with lower levels of schooling, and come from a disadvantaged socio-economic context. They are also more likely, proportionally, to have children and own their own home. Despite those differences, however, the authors insist that determination and commitment are the key to the success of the learning experience.

### 2.2.5. Learning Difficulties

A study by Morin (2006), who surveyed Francophone adults in the Sudbury area, focussed on reading skills to better understand the causes of reading problems, or dyslexia. However, the results did not lead to any definite conclusions and this very complex field will require further research.

The ethnographic research conducted by Bélisle (2003), on the other hand, focusses mainly on writing, from the perspective of creating a culture of writing, with a vision of sustainable development for the individual geared toward participation for all. An analysis of four inter-

related aspects was conducted in an attempt to understand this culture of writing in that social perspective: the physical environment of writing, the related practices and action of community players that deal with writing, the rapport established between writing and project facilitators, and the rapport between writing and young adults participating in literacy programs. The author thus brought the two major players involved in the mechanics of learning—facilitators and learners—face to face. The study's findings and the various logics that come into play, open a window into the "writing" culture of the people surveyed and allow a look into the unified vision of the relationship to writing that is implicit in the rhetorics on literacy.

In ulterior research, Bélisle (2007) examined the reading skills and practices of non-graduate adults and discovered that, unfortunately, the workplace of non-graduate adults requires few reading skills and little writing abilities, as was seen earlier.

And finally, a study by Pelletier (1999a, 1999b) looked at cognitive educability—more specifically, the use of a development program promoting logical reasoning in literacy programs. This process, still in progress, shows that the learners' capacity to reason is actually weaker than previously thought. Research in this area should be pursued, in order to assess the abilities developed.

It seems that, to complete the work on the learning difficulties of adults, consultation of the research performed by Quebec and Franco-Canadian university researchers who have developed the area of "ortho-andragogy" (to use a neologism) is required. This new field emerged over the last two decades, from research by Estelle Chamberland of the *Université de Montréal*. This field should be documented and integrated to the CDÉACF catalogue.


**To summarize this section**, learning difficulties, barriers and experiences constitute the second largest theme in terms of referenced documents. Studies on barriers to participation are well-documented and their characteristics well-known, especially in regards to individuals with low levels of literacy. However, one must take into account the language aspect for Francophones in minority settings, as well as for individuals who speak another language. From this standpoint, very little data was found on immigrants.

The fact that the first two sub-headings involve individuals with barriers and difficulties is interesting. We know the considerable influence their schooling history has and the economic situation they are in, are rarely conducive to pursuing or resuming their education. In fact, even adults whose educational path leads to university studies experience both pleasure and pain. Too much pain however leads to dropping-out, sometimes at a young age when acquisition of basic skills is compromised, but also often at an older age, even in a community setting that is more open and better equipped to help those in need*.*

## 2.3.    Nature and Fundamentals

The "Nature and Fundamentals" heading broadly covers the theories, models and principles underlying adult learning. Without going into all the details, this general classification can look at definitions, cognitive styles, and factors affecting success or motivation. Under this heading are classified 26 studies, a figure that is both low and considerable: low because, essentially, many studies, especially those conducted in a university setting, focus on these aspects; and considerable, because several of these documents are actually collective works that comprise various articles on the subject. In fact, 14 of the 26 documents are monographs, of which about 12 fall into this category. The other documents are doctoral dissertations, Master's theses and magazine articles. We will discuss them from two main points of view: that of adult education in general (17), and more specifically of literacy (9).

**Figure 5 – Nature and Related Sub-Headings**
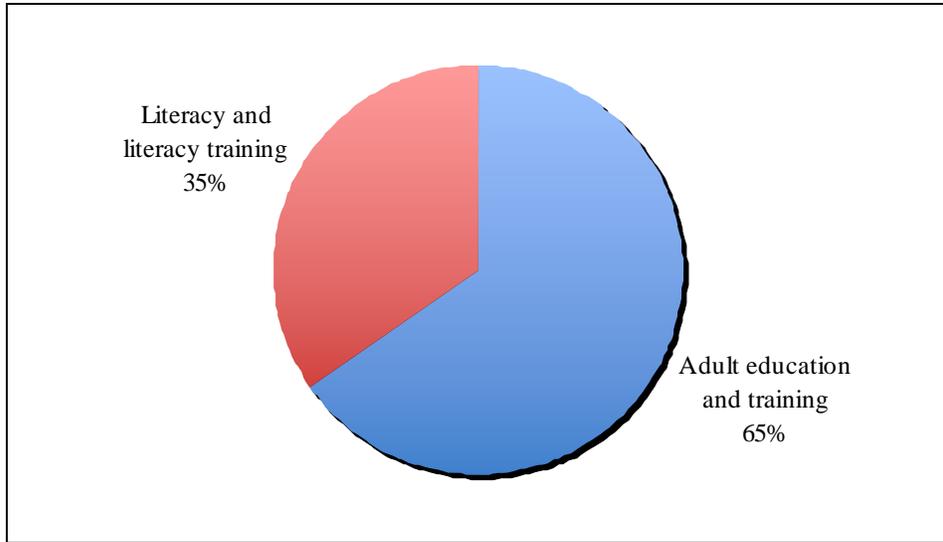


### 2.3.1.  Adult Education and Training

Seventeen documents have been reviewed in connection with the "nature of learning" for adults enrolled in education and training; among them a special issue of *Possibles*, three other journal articles, a doctoral comprehensive examination, a doctoral dissertation, a Master's thesis, and 10 monographs (mostly compendiums).

An impressive Statistics Canada publication by Murray, Clermont and Binkley (2005) is very much worthy of mention. It discusses the foundations upon which to measure adults' basic skills. The analysis of scientific documents is thorough and painstaking for each skill measured: comprehension of prose literacy, document literacy, and quantitative literacy; numeracy; problem-solving; teamwork; practical cognition; and ICT literacy. This study is the reference for determining if a given skill has been retained and identifies the tools needed to measure it. These tools are those used to conduct international surveys on literacy.

Several works focus on learning. In his book, Marchand (1997) provides a survey of lifelong learning from the viewpoint of adult education and andragogy. Ruph (1997) offered a detailed summary on competence and adult learning, establishing a theoretical framework based on Bandura's concept of self-efficacy. Danis and Solar (1998), in a compendium of seven chapters by Quebec researchers, deal with adult learning processes in a developmental perspective (Danis); the inequity of separating thought from knowledge in a context of domination (Solar); Piaget's equilibration principle as applied to adults (Legendre); expertise developed in adults (Hrimech); and adult mental operations in a museum setting (Dufresne-Tassé). This work succeeds in linking learning to development in adults.

Finally, Solar (2001a) proposes a research on the *role a group plays in adult education*, an aspect of adult education which has received very little attention from researchers although it is commonly used. Two chapters provide data on cooperative learning and peer tutoring in university groups in Quebec (Marie-Josée Legault), as well as on knowledge and its relationship to adults in learning groups (Solar).

Experiential learning is however, the focus of journal articles by Balleux (2000b) and Chevrier and Charbonneau (2000). Balleux (2000), who examined the evolution of the *concept of experiential learning in adult education,* indicated that, over 25 years, the concept has changed from a process of constructing knowledge to that of searching for meaning, thereby encompassing the very concept of learning. For their part, Chevrier and Charbonneau (2000) looked at *experiential learning and knowing in the context of David Kolb's model,* analyzing

cognitive functioning during the independent learning of text processing—an analysis that shows the importance of when and how different modes of functioning are implemented.

Chevrier, Fortin, Leblanc and Théberge (2000) published an article on the nature of learning styles, as the numerous models developed over the years by researchers and professionals have given rise to extremely diverse, sometimes even contradictory, concepts. Six aspects of the problematics associated with learning styles are examined: definition, multidimensionality, relative value of dimensions, stability, origin and modifiability. The restrictions observed led the authors to reconsider learning styles from a constructivist point of view.

As well, Tremblay targets independent learning in his latest work (2003). *L'autoformation, pour apprendre autrement* took stock of years of his work, initially focussed on self-directed learning among independent learners (1976-1987), and continued with corporate training (1989-2002). During those years, Tremblay looked into the needs of independent learners, the barriers encountered, and the resources that support learning. Research on independent learning identified the key skills required to be an effective learner. Accordingly, learners must know themselves and be able to reflect on their actions, tolerate uncertainty, know how to adjust to events, and know how to network. It should be noted that an entire area of research on independent learning in Quebec should be incorporated into the CDÉACF database. These studies have been conducted by research teams, GRAAME (research group on self-initiated learning in an educational environment) and GIRAT (interdisciplinary research group on independent learning and work). The main studies on adult learning outside the workplace examined learning principles (Danis and Tremblay), metacognition (Danis and Tremblay, Hrimech), tasks to be performed in self-directed and independent learning (Tremblay and Danis, Tremblay), and informal learning strategies (Hrimech).

As with literacy, technology belongs under the heading "Nature and Fundamentals" of learning. A publication by Contact North in Ontario (Daniel, 2002) proposed four basic principles for the effective use of information and communications technologies, with a view to quality learning and efficient management. Harvey and Lemire (2001) explored this *new education* brought about by ICTs and related transdisciplinarity, arriving at a definition of learning in this era of workgroup computing. Paquette-Frenette (2005) directed her doctoral dissertation on distance-learning in adult education in Francophone Ontario. It aimed at recognizing the importance a group plays in post-secondary online courses offered via video-conferencing or audio-conferencing. The author found that the group served 31 functions and that, in all respects, the group plays a major role in learning whether it is in terms of utility or identity. In addition, this research also looked at the learning of French in a minority setting. Lastly, Brassard (1999), in his Master's thesis, showed that Reeves' model provides a good reference framework for developing Web-based teaching methods, and that activities conducted in a Web environment are conducive to the use of collective learning methods from the perspective of joint knowledge building.

The concept of equity is dealt with in two collective works—gender equity, in the case of Solar (1998), and equity in a broader sense, in that of Solar and Kanouté (2007). *Pédagogie et équité* (Solar, 1998) presents the foundations on which the author built her "canvas of equity" (Solar); research on feminist strategies to teach college-level physics (Davis and Steiger); feminist action tools for use in social work (Coderre and Martel) and mathematics (Lafortune); perspectives on continuing training for nurses (Saint-Pierre); feminist studies at UQAM (Caron); and knowledge on the health of female employees (Messing, Dumais and Seifert). *Questions d'équité en éducation et formation* (Solar and Kanouté, 2007), a compendium by 11 researchers, suggests tools for detecting unfair practices and establishing equitable ones (Solar). Adult learning is the theme found in four chapters: teaching in an intercultural setting (Kanouté); parents of pupils in ethno-cultural communities (Kanouté); and the lack of immigrant students in teacher-training programs (Lavoie and Pons). In this edition, Thésée and Carr conducted a more in-depth analysis of the basic aspects of equity as they relate to cultural discontinuities.

Landry (2002) edited a collective work on cooperative education. The chapters on Canada dealt with the development of such programs in Quebec (Landry and Mazalon); cooperative education in post-secondary institutions throughout Canada outside Quebec (Van Gun and Grove White); cooperative education at the college level (Veillette); placements in cooperative education at the college level (Landry, Bouchard and Pelletier); cooperative education in a pulp-and-paper training program (Savoie-Zajc and Dolbec); cooperative education as a means of reconciling the economy and education (Maroy and Doray); the development of cooperative education in Quebec from a macro-social standpoint (Doray and Fuselier); along with cooperative education and placements in a regional context (Caron and Payeur). Together, 17 researchers analyzed cooperative education practices and research as a mean to organize training or as a pedagogical strategy.

This section on the nature of adult learning concludes with the issue of *Possibles* (2004) entitled *La formation au travail, virage ou mirage?* Its selection is due to the authors who deal with fundamentals such as the *virtual communities of practitioners* (Tremblay); job economic training (Blondin and Sylvestre); *a global approach to training* (La Ferrière); *continuing training in a community context (Solar)*; Bernier's *"soft skills" training and social engineering*; and *intermittent employment as a unique relationship with training (Voyer)*.

### 2.3.2. Literacy Training and Literacy

There are nine documents on literacy training and literacy: Wagner (in Hautecoeur, 1997), Sidambaroumpoullé (1997), a group of instructors from the Chicoutimi School Board (1997), Filion (2005), Duchesne (1999), Vadnais (1999), Karsenti (2001), Bélisle and Bourdon (2001), and Green and Ridell (2007).

In Hautecoeur (1997), only Wagner proposes a text on Canada. After providing a review of Quebec literacy-training policies, the author emphasizes the new direction taken with "scholarizing" literacy to increase employability. This new policy positioning, not only redefines the direction of literacy training, but it also enhances the problems of inequity for some.

Sidambaroumpoullé (1997), for her part, is proposing a new pedagogical action model better suited to an illiterate, Creole population. Accordingly, she examined the concepts of mediation, constructivism and cognitive educability. Her conclusions led her to suggest the development of a grammatical system and pedagogical tools that describe the French language from a Creole perspective. Hence, the key role of the mother tongue in literacy training is confirmed, as in Durandisse (1999) whose research followed the same path (discussed in the content section.)

A group of instructors from the Chicoutimi School Board (1997) analyzed the notions of constructivist and cooperative approach with respect to not only existing practices, but also future practices to be developed using this approach. This exercise attempted to find methods of cooperation between the instructor and the client.

In her Master's thesis, Filion (2005) used an ethnographic approach to study the issues involved in the democratic life of community groups. In so doing, she hopes to enhance mutual understanding between stakeholders and participants in a democracy, which the former praises, but the latter dreads.

Duchesne (1999) made literacy training for mentally-disabled adults the subject of his doctoral dissertation, with a view to developing a theoretical framework that would foster the success of literacy activities for this client group. An educational model focussing on the needs and motivation of these adults was developed, motivation also being at the heart of the work by Vadnais (1999). In her Master's thesis, she studied the path of women in literacy training to reveal the relationship between these two aspects.

Karsenti (2001) looked at literacy training from an ICT perspective and raised the issue of computer illiteracy as a new social problem.

Writing is the focus of Bélisle and Bourdon (2001). The authors of this compendium examined writing skills throughout the lifetime, paying special attention to the writing practices of adults—especially non-graduates. This work is made up of three sections: one on the issues of plurality in writing and literacy research; another on the past and the future of the rapport to writing in literacy training; and the third, on empirical research. The authors also considered the practitioners working with them.

Lastly, in the field of literacy training, the Statistics Canada publication by Green and Ridell (2007) sheds new light on literacy through an analysis of the changes in results between the IALS of 1994 and the International Adult Literacy and Skills Survey of 2003 (IALSS). The authors indicate there were some skill improvements in adults, especially in regards to basic skills; the mother's education level, in particular, having the greatest effect on children's literacy. That literacy is also linked to schooling and maintained as long as progress is achieved in both schooling and in literacy. This correlation however is not exactly true as some people with low levels of schooling reach high levels of literacy. The authors also note there is no link between literacy and age or occupation; the loss of skills is primarily due to lack of use. In fact, literacy is more equitably distributed among the population than income.

**To summarize this section**, we have developed the theme pertaining to the nature of adult learning from an educational and literacy perspective. Constructivist, socio-constructivist and feminist theories all have a place here. Some research examines motivation, learning styles, experiential learning and cooperative education. Equity and a democratic perspective is also targeted in other studies. Literacy skills, writing skills, and skills for learning how to learn are the focus of various other works.

Nevertheless, research is absent on some other more fundamental aspects. No references were found to cover the philosophical or social-development angles; no exploration of the economic aspects of adult education in a global sense, including literacy; no discussion of the knowledge required for the 21st century; and no basic criticism of the approaches to literacy. Furthermore, despite the 26 references comprising an even greater number of studies, the theme of the nature and fundamentals of adult learning requires further examination.

### 2.4.    Literacy

Literacy became a theme after the database entries on adult learning were processed. This stands to reason as, over time, the concepts involved in literacy training and lifelong learning have changed. The interest in adults' skills and levels of literacy has grown. The necessity is also felt to separate the theme of literacy from that of participation. Often, in the 24 studies under this heading, a link to the extensive literacy surveys conducted by Statistics Canada is drawn, especially to the IALSS 2003.

This section begins with a discussion on a historical study that pegs the current situation as evolving from a past where communications occurring through a medium as strange as the Internet was never once imagined. Indeed, in his doctoral dissertation, Verrette (2002) examined developments in literacy training in Quebec from 1660 to 1900, describing how Quebec's society, at one time a culture based on oral tradition, became one dominated by writing. He collected his data from the 49 parish registers where the ability to sign one's name was considered a criterion of literacy. He concludes that the level of literacy stagnated at between 13% and 30% of the population until the mid-1800s, but that 75% were literate at the end of the century.

**Figure 6 – Literacy and Related Sub-Headings**
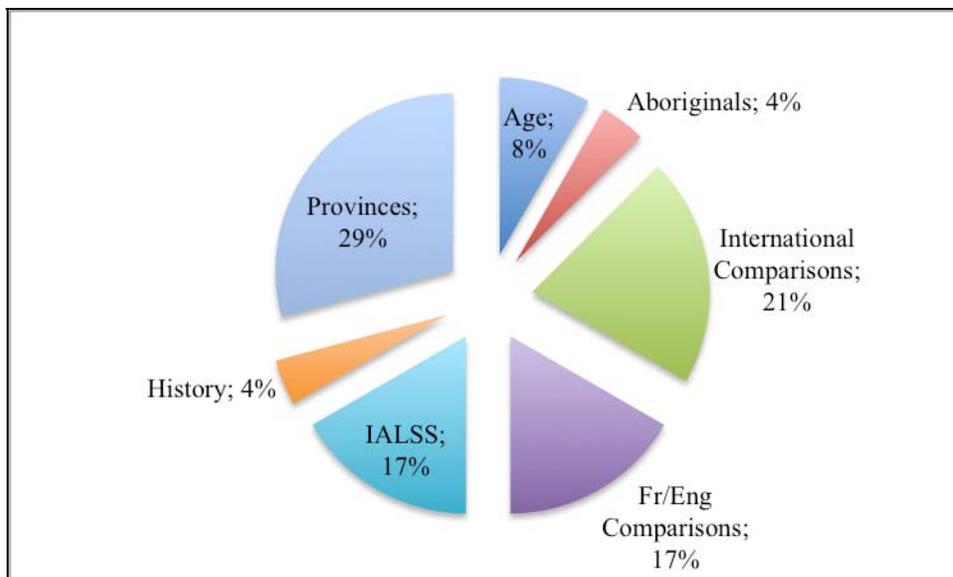


To facilitate the survey of all research on literacy, entries dealing with IALSS general data (4) were examined first, followed, in decreasing order of occurrence, with research associated with the Canadian provinces (7), international comparisons (5), Francophone and Anglophone comparisons (4), and literacy according to age (2) and among Aboriginals (1).

### 2.4.1. IALSS General Data

In the 21st century, views on literacy training in the industrialized countries are changing, and literacy became the benchmark for adult skills. Murray, Clermont and Werquin (2006) developed a widely accessible microdata file of IALSS data, whereas Statistics Canada (Barr-Telford and 15 others, 2005) presents results for Canada as a whole in a document entitled *Building on Our Competencies,* highlighting literacy, numeracy and problem-solving skills for the Canadian population. The report gives a skills breakdown for the ten provinces and three territories, as well as for specific sub-groups such as immigrants, Aboriginals and minorities speaking official languages. socio-demographic characteristics such as age, education, type of work and income in relation to literacy, numeracy and problem-solving results are also analyzed. The following excerpt is a summary of those highlights:

- "The average proficiency scores of the adult population aged 16 and over in the Yukon, Alberta, Saskatchewan and in British Columbia are above the Canadian averages across all four domains measured in the IALSS 2003 while they are below in New Brunswick, Newfoundland and Labrador, and Nunavut;
- Nova Scotia, the Northwest Territories, Manitoba, Ontario and Prince Edward Island have average scores are statistically very similar to the Canadian averages. However in Quebec, the average scores for prose and document literacy are below the national averages while there is no difference for numeracy and problem-solving skills.
- Nationally, 48% of the adult population—12 million Canadians aged 16 and over—perform below Level 3 on the prose and document literacy scales (about 9 million or 42% of Canadians aged 16 to 65). Level 3 proficiency is considered to be the "desired level" of skills for coping with the increasing demands in the knowledge and information economy.
- At 55%, the proportion of the Canadians aged 16 and over with numeracy scores below Level 3 is even more pronounced.

- Overall, there has been little change in literacy performance between 1994 and 2003.
- The established patterns of literacy proficiency continue to prevail, with higher performance among the young and the more educated individuals.
- In New Brunswick, Quebec, Ontario and Manitoba, scores for Francophones are lower in prose literacy than for Anglophones.
- Maybe due in part to varying levels of education and speaking a mother tongue other than French or English, the literacy performance of the Aboriginals surveyed is lower than that of the total Canadian population.
- The number of immigrants with a mother tongue other than English or French at Level 1 on the prose literacy scale is twice as high as immigrants with English or French as mother tongue, and over three times higher than the Canadian-born population as a whole.
- Proficiency of Canadians aged 16 to 65, in literacy, numeracy and problem-solving is clearly linked to their labour market outcomes. Those employed have higher proficiency scores on the IALSS than those who are unemployed or not in the labour force.
- Respondents reporting poor health score lower on the documentary literacy scale compared with those reporting fair, good or excellent health. Although the nature of this relationship needs to be explored further, the evidence suggests an interaction between health and literacy issues.
- High levels of proficiency in prose literacy are associated with higher engagement in various community activities. Literacy may be a key factor in building a socially-engaged community, while such a community in turn may be more likely to develop the right kind of environment to sustain and improve on literacy.

Brink (2005a, 2005b) supports these findings with the study she conducted on the provinces and territories, participation, ICT use, health, civic engagement, income and occupation, as well as data on women, men, Aboriginals, immigrants and people with low levels of education. The data corroborate the fact that women need higher levels of literacy than men in order to earn more than $20,000 per year.

### 2.4.2. Literacy in the Provinces: Prince Edward Island, New Brunswick, Manitoba, Ontario and Quebec

Corbeil (2006), whose work also appears in the section on Francophone/Anglophone comparisons, showed that, in Ontario, more than half (55%) of the Francophones are at Levels 1 and 2, as compared with 42% of Anglophones. In Manitoba, the proportions are 53% and 37%, respectively. In regards to Quebec's English-speaking minority, 43% of Anglophones have not reached Level 3 on the prose literacy scale, as opposed to 55% of Francophones. The survey also indicates that nearly 45% of Francophones aged 16 to 24 in New Brunswick and Ontario are below Level 3 in prose and document literacy. In comparison, only 34% of Anglo-Canadians in the same age group are in a similar position. An improvement in literacy levels among Francophones occurred between 1994 (the year of the last literacy survey) and 2003, primarily due to better performance among Ontario Francophones; in New Brunswick, no statistically significant increase was observed.

Brink (2006) presented IALSS data for all of Canada in a PowerPoint presentation, focussed on Prince Edward Island, but included no information on Francophones from P.E.I. or the Atlantic provinces. According to this document, P.E.I. adults are within national averages, except for numeracy, where more fall below Level 3.

The situation in New Brunswick is explained by Pignal, Knighton and Literacy New Brunswick Inc. (1998). They examined a sample 966 people aged 16 and over, of which 495 Anglophone respondents and 471 Francophones. The data from the 1994 IALS showed that some 60% of adults in New Brunswick fall into literacy Levels 1 and 2 in all three reading categories, Francophone levels being lower than Anglophones'. The research also indicates that Level 1

adults are five times more likely to be unemployed than those in Levels 4/5. This study also shows that people in New Brunswick read less than elsewhere in Canada.

Garceau (1998), in his work requested by the *Centre franco-ontarien des ressources en alphabétisation* (FORA), Ontario's Ministry of Education (1998), and the Ontario Ministry of Training, Colleges and Universities (2001), also draws upon ALL 1994 data. The first research consists of a literacy *report on adults in French-speaking areas of Ontario*; the second deals with *adult literacy in Ontario*; and the third examines the *literacy profile of adult Francophones in Ontario*. His work for the Ministry of Education presented data for the whole of the province, whereas the other two studies focussed on Francophones, a group representing 5% of Ontario population dispersed throughout the province. In these reports, Francophones tend to have a lower literacy profile compared to the Anglophone majority: 60% of the French-speaking individuals are at Levels 1 and 2, as opposed to 40% of Anglophones. Most Level 1 adults are located in southwestern Ontario (50% in the document literacy category), while a high proportion of individuals at Levels 4/5 are in the eastern part of the province (18% for prose literacy). In northern Ontario, some 30% of respondents are at the first three levels, and 9% into Levels 4/5. Age is also a deciding factor: 66% of individuals 65 and over are at Level 1 as is the case in other studies. Academic attainment, parents' education level, employment and income are also significant factors. Garceau (1998) puts special emphasis on the profile of Ontario Francophones in the lowest literacy levels (1 and 2). The Franco-Ontarian community is deeply affected by low education levels and illiteracy, because with the former comes low reading skills, and nearly 65% of Ontario's Francophone population has not enrolled in post-secondary education.

Bernèche and Perron (2005) and Bernèche *et al.* (2006) focussed on Quebec. Data from the IALSS 2003 is used in both studies, making a comparison with the IALS 1994 data possible. The first discussed the ability of Quebec adults to understand and use written information, as this is the main objective of the highlights issued by the *Institut de la statistique du gouvernement du Quebec*. The second report entitled *Développer nos compétences en littératie : un défi porteur d'avenir*, completes the overview of literacy in Quebec in 2003 by examining the situation of the 4,166 Quebec adults aged 16 and over. Approximately 55% of the population falls into Level 2 or lower for prose and document literacy. However, it seems the number of individuals at the lowest level is decreasing while it is increasing for those in Levels 4 and 5. In other words, performance in Quebec seems to improve, nearing the results of the Canadian population which appear more stable. As with similar studies, Quebec adults aged 16 to 25 perform better than their elders, and, on average, men score higher than women in numeracy and document literacy. A higher level of education also becomes an asset when literacy skills and the lifelong development and maintenance of those skills are explored.

This study also reveals that adults enrolled in formal types of education and training have better literacy averages than those who have not participated in any training. Although as a rule Anglophones do better than Francophones, this difference is no longer evident among groups with the same level of education.

Hence, the authors conclude that, although Quebec adults seem to be enhancing their literacy skills, they need to do more work to develop greater skills, while also wondering whether the improved performance in the Canadian average is due to the effectiveness of the education system and adult basic skills training efforts. In their opinion, the results demonstrate the need to promote higher education levels, especially among young people. To expand on initial education, the skills acquired must be maintained and further developed. There is also a need for more focus on basic skills training requirements of unemployed adults.

### 2.4.3. International Comparisons

Data from international surveys like the 1994 International Adult Literacy Survey (IALS) and the IALSS led to a number of comparative studies. Murray *et al.* (1997) and Darcovich *et al.* (2000) conducted such a study on an international level by comparing IALS data for 12 and 21 countries respectively. It has come to light in Darcovich's study that the skills of older cohorts are considerably lower than those of young people in all countries examined, which leads to believe that investing in literacy training for young people is not enough to provide a quick solution to the skills problem experienced by adults. In his research, Tuijnman (2001) also draws on IALS data to draw a comparison between North America and the other countries involved in the survey. According to the study, the literacy performance of adult Canadians and Americans is average, and in both cases, the breakdown of prose-literacy comprehension abilities varies considerably. This variation is linked to inequities in income, as well as levels of education, and quality of instruction. In their research, Murray *et al.* (1997) concluded that the solution to the problem of adult literacy is the active, daily practice of reading and writing, at home as well as at work. Furthermore, the employer plays a fundamental role in literacy insofar as most adult learning takes place in an occupational setting.

These findings, very similar to those reached by Clermont *et al.* (2005), constitute the first report on the IALSS, where an analysis of seven countries or regions—Bermuda, Canada, the United States, Italy, Norway, Switzerland and Mexico's Nuevo Leon state—is conducted. The study reveals major differences in the demographic breakdown of skills, both within each country/region and among all seven. "Low skills," note the authors, "are evident among all adult groups in significant—albeit varying—proportions. Skills vary substantially even at similar levels of educational attainment." Hence, evidently some countries can promote skills development beyond the initial schooling period more easily and succeed in influencing positively economic success and quality of life. For some countries, high levels of skills were developed in multiple domains, while others have managed to improve the skills of the entire population and others still have come close to realizing lifelong learning for all. The authors conclude that improving skills, particularly among those with real life deficits, remains a huge challenge, but policy can make a difference.

However, these international comparisons reveal lower levels of literacy among Canadians relatively to other Nordic countries. That probably explains why Kapsalis (2001) used IALS data to conduct a comparative study involving Canada and Sweden, as the latter has the lowest incidence of reading difficulties, while Canada's performance ranked mid-way among the 12 countries surveyed. The author noted education and literacy as more noticeably linked in Canada as opposed to Sweden: 39% of Canadian adults who have not attended post-secondary institutions have low reading and writing skills, as compared to 18% of Swedes. Another difference is that young people in Sweden are more involved in volunteer work, and visit public libraries more often than young Canadians. Unions, which are greater in numbers in Sweden than in Canada (90% of Swedish workers are unionized) promote literacy via study groups. Lastly, television programs and sub-titled films also promote reading, especially among children from families with limited reading and writing skills.

### 2.4.4. Comparisons between Francophones and Anglophones in Canada

While the above-mentioned papers compared Canada with other countries or regions, comparisons can also be established within this country, as was accomplished in four studies comparing Francophone and Anglophone Canadians. Among them are Corbeil (2000) and Wagner, Corbeil, Doray and Fortin (2002) which drew on IALS 1994 data, and those by Corbeil (2006) and Venne *et al.* (2006) used IALSS 2003 data.

Corbeil (2000) found that three times more Anglophones (27%) than Francophones (9%) are at the highest level of competency in Canada, while twice as many Francophones (25%) as Anglophones (13%) are at Level 1. There are higher percentages of Francophone adults at

literacy Level 1 (31% to 38% for the three levels of literacy) in New Brunswick; the discrepancy between the two language groups is also highest in that province. Considering average literacy scores, the gap remains significant between these two language groups, as well as between Quebec Francophones and those living in other provinces.

Wagner, Corbeil, Doray and Fortin (2002) consolidated the knowledge on Canadian Francophones in a study for the *Fédération canadienne d'alphabétisation en français* (FCAF). He notes that many Francophones outside Quebec have lost their oral and written French skills due to the instrumental use of English; neither the education of young Francophones in French-language schools nor adult education programs were able to close the gap between Francophones and Anglophones. In fact, Francophones do not use their literacy skills much in their daily lives; they read at work more than they do at home. Their relative weakness in literacy results from a number of factors originating in their childhood, at school, in their everyday life and professional life.

In 2006, Corbeil turned his interest toward official-language minorities in Canada. He "over-sampled" Francophones from Ontario, New Brunswick and Manitoba (these provinces being home to some 75% of the entire French-speaking population outside Quebec) to ensure the study was as comprehensive as possible to better understand the situation. He expanded his objectives in comparison to the previous survey :

1. To examine French literacy levels for Francophones outside Quebec choosing to take the tests in English, as compared with those who took them in French;

2. To analyze the impact of the language respondents use to read and write at home and at work, and the language in which they watch television;

3. To determine the literacy status of Quebec Anglophones, and compare it to Anglophones in the other provinces and other minority groups;

4. To determine the factors with a positive impact on the success and development of certain groups of individuals living in a minority-language settings.

Analyzing IALSS 2003 data led to a few new findings. The importance of the linguistic, cultural, economic and social settings of individuals is brought forth. The author also points to the necessity of examining the major barriers historically faced by Francophones to explain why they lag behind Anglophones, both in Quebec and in other provinces.

The weaker performance by Francophones seems to be a result of social, historical and cultural factors. Although this problem is partly offset by the accessibility of mandatory education up to age 16, it has not been completely resolved. At the pan-Canadian level 42% of the population aged 16 to 65 has not managed to reach Level 3 on the prose-literacy scale, Anglophones at a rate of 39%, while 56% for Francophones The author indicated that New Brunswick is where the widest discrepancy is observed between the linguistic groups. In that province, two-thirds (66%) of Francophones have not reached Level 3 on the prose-literacy scale in 2003, as compared with 51% of Anglophones.

Furthermore, at equal levels of education and income, the literacy performance of Francophones outside Quebec is weaker compared to their English-speaking counterparts. They are also less inclined to develop daily reading and writing habits, visit a library or bookstore, or have a considerable collection of books at home.

In Quebec, as in all provinces, nearly one of two Anglophones reports reading books at least once per week, but only 35% of Francophones claim to do so. Reading books is at the practised in New Brunswick, with somewhat less than one-third of Francophones (33%) reporting reading a book at least once a week, and almost 60% stating that they never or rarely do.

**To summarize this section**, the author (Corbeil, 2006) draws attention to a worrisome phenomenon revealed by the IALSS data: 63% of Franco-Ontarians and 85% of Franco-Manitobans opted to take the tests in English, even though a large percentage claimed to have very good written and oral French skills. For Corbeil, this observation is the real French-language literacy training challenge to ensure the survival of minority Francophone communities.

The study by Venne (2006) responds to a request from the *Regroupement des groupes populaires en alphabétisation du Quebec (*RGPAQ), and draws the picture of the main IALSS findings, in terms of various socio-demographic criteria, including a comparison with the other provinces as well as other surveyed countries. The author analyzed those results and was able to identify the major barriers to accessing adult training, and the actions required to remedy the situation. The data brings forth links between literacy and age or education, the effect of aging being mitigated by level of schooling, and the relationship between skill levels and participation in a variety of learning activities. The author believes the IALSS demonstrates the importance of avoiding generalizations about individuals with literacy and numeracy deficiencies. Various elements combine to establish a profile that is unique to each individual. Hence, the challenge for community literacy training to take these nuances into consideration.

### 2.4.5. Literacy over Time

The research using IALS and IALSS data, including that of Barr-Telford *et al.* (2005) and Venne (2006), reveal a drop in literacy levels over time. This phenomenon is examined further in two studies: on the one hand, there is Statistics Canada Bulletin on the National Longitudinal Survey of Children and Youth (NLSCY). This survey covered 1,329 Canadian children aged 8 or 9 in 1994-1995 who took a literacy test ten years later. This test, made up of 36 questions, constituted an abridged version of the IALSS, and involved two types of literacy: prose and document.

The document established a link between literacy among children and literacy ten years later, regardless of other socio-demographic factors. In other words, low levels of literacy at ages eight and nine resulted in similar levels at 18 and 19 years. However, this did not prove to be completely decisive either, as a young person improving his prose and document literacy skills early on can improve his literacy test scores later. The parents' reading and writing habits is a factor that particularly influenced young people's performance. Furthermore, young people with the best literacy performance seemed to have higher educational expectations in terms of their academic career and university studies. Finally, it happened in some cases, that high-school students with part-time jobs had better literacy scores.

Willms and Murray (2007) focussed, not on young adults and their history, but rather on the gain and loss of literary skills over the lifetime. In their study, the authors compared IALS 1994 and IALSS 2003 data among different cohorts, and arrived at the conclusion that:

- There is a significant skill loss for adults around age 40;
- That loss is more pronounced for females, especially older women;
- Drop-outs do not experience skill loss, but graduates do;
- Individuals who further their education and training lose fewer skills than the general population;
- Employed individuals score higher as well.

In other words, inactivity or lack of training activities, the labour market and volunteer work being included here, bring about a decline in literacy skills after age 40.

### 2.4.6. Aboriginal Literacy

In a study entitled *Literacy profile of Off-Reserve First Nations and Métis People Living in Urban Manitoba and Saskatchewan*, Bougie (2008) defines a general profile of the literacy skills of two very specific segments of Canada's Aboriginal population. According to the author, in the Métis and First Nations cultures, IALSS literacy indicators in no way represent all literacy practices considered important, or the effective literacy of Métis and First Nations members in an Aboriginal language. In an urban context, however, the ability to use and understand the type of information assessed by the IALSS may be generally related to a certain number of positive results that should be explored accordingly.

It is worth mentioning the observation that the literacy performance of First Nations members living off-reserve and Métis residing in the urban areas of Manitoba and Saskatchewan tends to be lower than those of their non-Aboriginal counterparts. Indeed, unequal distributions in literacy skills may give rise to social and economic inequities among social groups, making it even more difficult to maintain acquired skills and developing new ones. Hence, there are proportionally more individuals classified at the lowest literacy levels among First Nations members living off-reserve in urban areas of Manitoba and Saskatchewan.

The analysis confirms the importance of education for First Nations members living off-reserve and Métis people residing in the urban areas of Manitoba and Saskatchewan. As for the non-Aboriginal population, higher levels of education are systematically associated with higher levels of literacy skills. Furthermore, once education is taken into account, there is hardly any difference in literacy skills between Métis and non-Aboriginals in urban Manitoba.

The analysis reveals a link between literacy skills and labour-market performance among the Aboriginal populations in the study. The data indicate that the proportion of First Nations members and Métis people in the labour market is systematically higher among individuals scoring Level 3 on document literacy, as compared to those below this level. In contrast, this gap is practically nonexistent among non-Aboriginal populations. The relationship between literacy and employability seems especially strong among First Nations members living off-reserve in urban Saskatchewan.

Age is a major factor to be considered when making conclusions about the skills breakdown of a given population, particularly when it comes time to develop strategies to improve those skills. Accordingly, special attention should be given to the lower literacy skills noted among First Nations members living off-reserve and Métis aged 16 to 35 in relation to their non-Aboriginal counterparts. A recent report shows that literacy skills tend to diminish with age, especially if the individuals in question do not have higher literacy-skill levels at an early age in a school setting. Consequently, not only are First Nations and Métis youths and young adults relatively more likely to experience difficulties at school and/or on the labour market, but their existing literacy levels may prevent them from gaining access to areas of the labour market reserved for highly qualified personnel that may help them acquire, or at least maintain, literacy skills.


**To summarize this section**, the major international surveys provide essential data on the literacy of Canadians, and make it possible to compare them, not only with literacy levels in other countries, but also among Canada's provinces and cultures. As shown by the surveys, the performance of the Canadian population is at par with that of the average industrialized country, with more than half its population at Levels 3, 4 and 5. However, Canada does not measure up to the good results achieved in Scandinavian countries, especially Sweden. Francophone and Aboriginal populations post lower literacy levels, although employment links help them all maintain better levels. Those for Aboriginals are understandable, given the fact that they had to take the tests in a language not their own (as is the case for immigrants); however, the same does not hold true for Francophones.

In Quebec, as elsewhere, Francophones have lower levels than Anglophones, with New Brunswick posting the lowest levels of all. Quebec and French-speaking Ontario have similar results, although Ontario Francophones improved their performance between the two major surveys of 1994 and 2003. It is important to remember that literacy levels in a specific language are related to the predominant culture, and living in an English-speaking environment makes it difficult to develop and maintain the Francophone culture. Francophones in a minority setting must constantly deal with English media and an English-speaking work environment, a fact that has been detrimental to French-language skills over time, and, as we know, literacy levels decrease with age if reading and writing skills are not used.

## 2.5.    Strategies

The following section deals with strategies. Seventeen (17) documents were classified. These were research projects investigating strategies for adults (6); training strategies (6); and strategies used by agencies (5).

**Figure 7 – Strategies and Related Sub-Headings**



### 2.5.1.  Strategies Used by Adults

Revenue Canada ordered an initial study on strategies for adults from by Cogem Research Inc. (1997) to understand behaviours and strategies adopted by people with low literacy levels, as well as the mechanisms used in their interactions with government departments, including Revenue Canada, and other institutions such as banks. According to the results, individuals with low literacy skills have little interaction with financial institutions, insurance companies and government departments. They do not expect much of Revenue Canada, which, they consider mere tax collectors and prefer direct contact with institutional staff (where the importance of staff empathy for them), often initiated through an intermediary. These people avoid any new or out-of-the-ordinary situations, and usually ask someone they trust to read their mail. In fact, the government often inspires fear or is synonymous with trouble. At home, televised news is their main source of information.

Seniors, both male and female, use similar strategies, but with certain differences. Since 53% of those aged 65 and over have low literacy levels, and 65% have difficulty understanding a simple text, whereas 42% say they have problems with governmental and institutional documents, Brousseau, Foley, Gervais, Jobidon and Panych (2001) provide a good book on

the basics of educational gerontology. It discusses the importance of learning at that age and its impact on health, community life and personal life. Because of their age, seniors must develop strategies to support a memory that is not quite as sharp in the short term as well as enhance long term memory. Inductive training practices based on seniors' experiences that help them establish links between what they know and what they should learn are therefore highly relevant.

De Coster and Drolet (2001) were intrigued by the openness of literacy clients to new learning via computers and the Internet, while at the same time demonstrating considerable resistance to learning activities to build literacy where change often destabilizes adults or where they are irritated or paralyzed by the unexpected. In fact, these adults use a limited inventory of strategies, and do not always achieve anticipated performance levels. The process remained instinctive and unconscious. Besides observation, rote learning, the use of external assistance, and the trial and error method is still the strategy most often mentioned. These adults try desperately to succeed, adopting mechanical, repetitive behaviour without varying their initial strategy and end up abandoning and protecting themselves against another failure. At the level of so-called metacognitive strategies, the internal language, although positive, is said to be self-reinforcing and to translate into an attitude of "I *will* succeed, come what may". This can cause discouragement. The fact that these adults do not improve their performance, despite their best efforts, enhances their feelings of incompetence and keeps them in a vortex of inappropriate strategies and failures. Furthermore, cognitive factors play a major role in their learning: they feel powerless and have a negative self-image. Feeling incompetent have major impacts on their learning path, increasing their level of stress and resistance, restricting strategies, weakening motivation, while detracting from the cognitive performance of learners. This situation must be remedied by finding ways of enhancing cognitive efficiency and promoting collaborative learning so participants can learn together.

Research by Hurtubise, Vatz Laaroussi, Bourdon, Guérette and Rachédi (2004) focusses on a different aspect. They speculate that there are several personalized, functional reading practices that differ from customary reading standards. This study targeted "weak readers" of which 104 were interviewed. This lead to the identification of three strategies used: the use of verbal memory; the use of substitution approaches (such as reading aloud) to avoid the need for writing; and the use of competent readers to assist in understanding written text.

In actual fact, adults who participate in literacy centres use a variety of strategies to compensate for their lack of reading and writing skills. Looking at the life stories of clients at Montreal's *Un Mondalire* centre, Guérard *et al.* (1999) examined social integration strategies. In addition to describing the strategies used by these young people to hide their illiteracy, the study advocates a strategy based on action and geared toward the strengths (memory and resourcefulness) and motivation (work, especially) of clients, which makes the prospect of learning more attractive and positive.

The book by Bertrand and Azrour (2000) is the last reference in this heading. Using simple language, the first section presents a summary of the research on learning theories. This monograph known primarily for its descriptions of numerous learning strategies with the aim of facilitating the development of cognitive skills among students, and of mastering the cross-curricular competencies required for learning, helps adults follow a path of independent study.

### 2.5.2. Training Strategies

In a number of studies (6), not so much the adult learning strategies are targeted, but rather those implemented to facilitate learning.

Antone, MacRae and Provost-Turchetti (2003) deal with Aboriginals, and emphasize the importance of Aboriginal language literacy training, along with policies respecting the particular nature of their culture, especially via community services, health promotion and the recognition

of languages. The different contributions to this symposium, which took place at OISE in Toronto, support the use of a holistic approach with Aboriginals in order to respect their culture, "as nurturing the spirit, heart, mind and body leads to a balanced life, and this in turn has a positive effect on the development of methods of knowledge-acquisition and communication". For Aboriginals, healing, claiming their own identity, language, culture and self-determination are significant to the learning and literacy-training processes. In that sense, a series of suitable approaches, including AlphaRoute, the Mchigeeng program, the Six Nations Literacy Achievement Centre project, and Kinnection are introduced in the document, but Aboriginal-language literacy training remains essential.

Betty and Tilleczek (2001) looked into the use of AlphaRoute *in rural northern Ontario communities not serviced by Literacy and Basic Skills agencies.* A Francophone community (Hornepayne) and an Anglophone community (Marathon) are targeted in this study which shows that, even where client numbers are low, adults can make progress using this distance-training strategy, where everyone is paired with an Alpha-delivery agency and a mentor.

The role of tutors in computer-authored activities is the focus of a dissertation by Bernatchez (2000). This training strategy provides a framework that eliminates the feeling of isolation common to distance learning, and promotes interaction with tutors as well as other learners. According to the author, this practice promotes retention in adult training.

Developing strategies that promote learning is also the focus of several studies, as is the case with Ruph (1997), who works in the field of cognitive education in adults attending university. Interested in metacognition and the self-regulation of learning, he decided, for his dissertation, to look at how cognitive efficiency workshops help to develop new strategies among those adults. Also studying university students, Alvarez (1998) based his Master's thesis on the experience of *insight* in problem-solving—which, according to the author, opens the door to the experience of comprehension.

In their work, Henri and Lundgren-Cayrol (2001) set out guidelines for collaborative distance learning. After providing an overview of the main trends in learning, the authors describe collaborative and cooperative strategies for creating adult distance-education opportunities. Interesting data on asynchronous written interaction, as well as on structuring the communication medium among learners are presented in this book.

### 2.5.3. Strategies used by Agencies

Bélisle has taken a long-time interest in the problematics of writing. She analyzed strategies used by agencies in two of her works. In the first (Bélisle, 1997), she looks at accessibility attempts by 26 public agencies targeting an audience with varying degrees of discomfort with the written word, and she highlights strategies that go beyond more traditional methods—i.e., changing writing habits and using community agencies to distribute information. It allowed some government agencies to establish or consolidate other practices promoting accessibility. For example, front-line personnel can validate print material as it is being drafted; individuals with reading or writing difficulties can obtain assistance from agency staff in completing forms; video and television are used; and direct contact with agency employees is encouraged. Barriers to such accessibility projects include budget cuts, a lack of pressure from clients in need of services and the agencies representing them; reluctance to use plain language on the part of employees who feel this would simplify the language too much; and the lack of results analyses that would make it possible to learn from particularly successful experiments and apply the knowledge to other settings.

The second study (Bélisle, Bessette and Paillé, 2001) aimed at achieving a more defined picture of the culture of "writing" in agencies involved in the social and occupational integration of young adults with low levels of schooling. Accordingly, the authors drew a link between the relationship of participating young adults to writing, and the reading and writing practices of

facilitators from six community agencies providing services in municipalities of less than 40,000 residents. It was then possible to consider the strategic role played by facilitators in helping these adults to read. According to the authors, a better understanding of the type of rapport young people with low levels of schooling have in regards to writing is in itself the cornerstone of a winning strategy. Their research showed that:

1. Attitudes toward writing vary for a same individual who might feel alienation, rejection, good will or effort in alternation according to the context and type of material; but facilitators focus too much on attitudes of alienation and rejection, concluding that young people do not like reading and writing;
2. Reading situations that promote self-expression and enhance interpersonal relations are valued;
3. Methods that enhance memory are preferred over those that promote work rationalization;
4. Some activities not associated to reading or writing—such as making a to-do list, grocery list or writing a letter to friends—create a favourable context in which to successfully practice reading and writing;
5. Facilitators often tend to transfer their own relationship to writing onto individuals with weak literacy skills.

Audet, Daneau, Desmarais, Dupont, Lefebvre and Trottier (2002) corroborate these findings. They conducted a five-year action-training study with employees at the *Boîte à lettres*, a community literacy-training agency. Their work, based primarily on autobiographies from 34 young people, gave rise to changes in the agency's action philosophy and work organization. These changes involved the systematization of teamwork and the establishment of a continuing training process alternating between theory and practice, and inspired by the biographical approach.

Lambert (1998), taking a different approach, wrote about the project of the *Centre de lecture et d'écriture* agency, that aimed at developing a grid to assess the content of websites appropriate for literacy-training participants enrolled in intermediate and advanced training programs. This strategy proved successful for certain adults: some managing to overcome their fear of computers, and others discovering a thirst for learning or even purchasing a computer.

Lastly, Lurette (2001) presents an action-research in connection with the *Centre d'apprentissage et de perfectionnement* (CAP), a French-language community literacy-training agency in Prescott county, in Ontario. This research-action project was aimed at better adapting practices to both the new requirements of the province's Literacy and Basic Skills program and the needs of clients being referred mostly by various income-support programs being forced to partipate as opposed to volunteering. An analysis of this experience and reflective practice provides a backdrop for a process that established new and more motivating andragogical practices for adult learners, in particular cooperative dynamics and structures facilitating a review of concepts and perceptions.


**To summarize this section**, numerous and varied strategies are used by adult learners and agencies. As there should have been more research available on adult learning strategies, it now seems that more needs to be said on the subject. In fact, the various agencies are concerned with their own clients, which is perfectly natural, but consequently, it yielded a fragmented profile that focusses primarily on adults with low literacy levels. The learning difficulties experienced by these individuals must be so obvious that they call for research to better understand and remedy those needs. This is one of the observations that was drawn from a summary of French-language research literacy training vis-à-vis the community (Solar *et al.*, 2006), which normally drives research aimed at providing a better understanding and taking appropriate action.

Agency strategies being a concept that came to enhance the "Strategies" heading, it unexpectedly became a new component of this current survey. Classifying these studies under the "Strategies" heading, they bring a new focus to the aspect of accessibility within the "engineering" of training. This fact that the research is added to this theme serves as a reminder that any agency, whether community or governmental in nature, is made up of individuals who come together to reach a common goal.

Finally, this theme deals with training strategies that could also have been classified under "Engineering". However, it was decided that they would gain a higher profile under this heading being closely linked to adult learning. This final point could and should be developed, if only to focus more attention on the practices of training personnel in order to identify their strategies and establish how these relate to adult-learning strategies on the one hand, and learning difficulties on the other.

## 2.6. Resources

The human and physical resources used to support adult learning are grouped into this section that houses eight (8) references on technology and training staff, and one (1) reference on documentation.

**Figure 8 – Resources and related Sub-Headings**
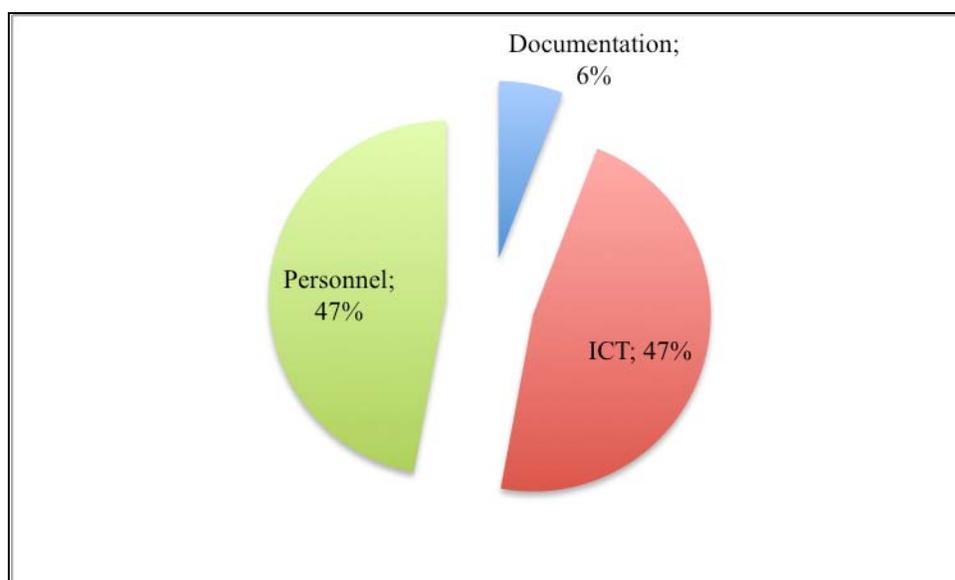


### 2.6.1. Technology

Technology is now an essential tool in all adult education and training activities whether it pertains to basic training or permanent education for highly qualified personnel. Accordingly, this topic rates high in the section on engineering (12 studies) as well as in this section on resources (8 references).

In 1999, Statistics Canada (1999) conducted a study on computer use in Canadian households. Already at that time, half of Canadians 15 and over had used the Internet in the 12 months preceding the survey, spending an average of eight hours per week online (with one person in six surfing for more than 15 hours). The main reason for using the net was communicating with friends and family. Also, spending time online tend to reduce that spent watching television by 25% and reading print documents by more than 16%. This study was updated and conducted in 2001 by Rotermann, Williams and Silver (2001). *Internet Use on the Cusp of the 21st Century* shows an increase of 22% over 1999, as well as a greater number of

surfers. In 85% of the cases, these were young people aged 15 to 24, but 13% were actually 60 and over. The report found the following: the higher the level of education, the higher the percentage of respondents owning a personal computer (13% for adults with less than a high-school diploma vs. 79% for those with a university degree), and a correlation of Internet use and income (with only 30% of individuals earning less than $20,000 using the Internet, as compared with 81% for those earning $80,000 or more).

Studies by De Coster (2002) and Quenneville and Dionne (2001) examined the use of new technology in community literacy settings. The use of educational software promoting initiative, exploration, creativity and independence in order for adults to enjoy discovering and learning without being judged is examined in the first. This encourages learning and mutual assistance, as well as the use of new strategies),The second study looked at the impact of *new technologies on the practices of a community literacy-training group*. According to the authors, the main political and social challenges to ICT implementation are related to communication and associational life. Both studies agreed on the importance of ICT use for self-actualization and overcoming the social exclusion that often affects illiterates.

A study by Pelletier (1997) also looks at community settings, and involves the main issues associated with computerizing community groups. The findings highlight the conditions necessary for the latter to adopt the new ICTs. The report also discusses the potential of ICTs, areas for priority action, and possible strategies. The physical inventory performed during this research indicates that a large proportion of hardware being in use at the time did not allow for Internet access. Fortunately, that situation has improved significantly.

Two other studies focus on ICTs also, but from the perspective of literacy distance learning. Breton (2005) together with the *Centre des lettres and des mots* (CLEM) conducted research on experimenting with collaborative distance tools (messaging, chat rooms, video-conferencing, etc.). For one, this experiment helped to describe the conditions required to maximize the use of distance tools: forming small groups, developing a meaningful plan, using simple tools, having properly trained instructors, ensuring availability of technical help, and fostering a climate of trust. Coulombe (2002) explores different distance literacy-training experiments carried out in Quebec and the rest of Canada, as well as elsewhere in the world. She brings forth studies and deliberations on distance learning able to steer developments in this field.

Finally, the last research document deals with women and technology. Lafortune and Solar (2003) are the editors of a book in which they report on a study of computer use among young adults attending CÉGEP, thereby emphasizing computer socialization via games (mainly in regards to young men, but also young women who have grown up in a virtual world). However, the primary interest here is on the chapters dealing with Internet use by women entitled*: on mouses and women: tamed ICTs* (Solar, Mitterand, Hackett and Richard), the *ownership of technologies by groups of women* (Solar, Ndejuru and Hackett), and *representations by stakeholders from the Scientifines agency on the development of women, science and power* (Théorêt and Garon).

### 2.6.2.  Adult Education and Training Personnel

We have opted for the expression "Adult education and training personnel" (hereafter labelled "personnel") to describe educational and adult training resource personnel who, in the field, receive many different titles and whose status varies substantially. They may be stakeholders from the community and community groups, teachers, university and college professors, managers or researchers.

Fréchette, Lelion, Gauhier and Legault (Groupe Communicom, 1998), while discussing the relationship between ICTs and the personnel, established a stakeholders' profile and positioning for new learning technology and media in Quebec. The study demonstrated the relatively small role played by community agencies and educational institutions when

compared to the literacy sector in regards to ICT use (1998), at least at that time. Kunz and Tsoukalas (2000) are more interested in the opinions of Ontario Francophone and Anglophone adults enrolled in basic training, as well as that of their instructors, on new teaching technologies. The survey results showed that more than 80% of literacy-training instructors had a computer at home, whereas this was true for only one in three adult learners. Instructors were therefore more familiar with computer use than their learners, even though only 7% of the latter said they had never used a computer. It is also a given that students enrolled in college literacy-training programs are more likely to use a computer and the Internet than those involved in community programs. Instructors use the Internet to look for information (73%) and consult their e-mail (85%). Many sign up for literacy-training mailing lists; their favourite Internet sites on this subject are AlphaPlus, NALD and Training Post.

At the request of CDÉACF, Bélanger and Doray (2004) carried out a study on adult education and training researchers—these individuals are currently at the heart of the RÉFA database, now incorporated into the COMPAS network hosted by CDÉACF. The aim of the study was two-fold: establishing a profile of the research on adult education and training in Quebec and French Canada outside Quebec; and identifying individuals performing research in this field. A survey of the period covering 1997 to 2004 revealed 112 individuals, 110 of whom indicated the aim of their research. These were: non-work-related training (21 or 19.1%); adult learning (18 or 16.4%); work-related training (16 or 14.5%); new approaches (16 or 14.5%); adult-education policies and strategies (15 or 13.6%); guidance counselling (13 or 11.8%) and literacy training (1 or 10.0%). Of this total, 61% fell in the area of education while 49% belonged in social sciences. Most researchers are women (63%) over 45 years of age (63%) and university professors (57%).

Bélanger *et al.* (2004) provide an analysis of the changes evolving among adult education teaching staff within the school system. This research surveyed adult education managers from 33 school boards and analyzed statistical data from Quebec's *ministère de l'Éducation, du Loisir et du Sport*, in 2001-2002. It identified 4,474 adult instructors of whom 1,166 were qualified teachers employed full-time; 1,486 with the same qualifications, but working part-time; and 1,822 who were paid on a per lesson or per hour basis. These data show a marked improvement in the status and financial stability of adult instructors. The number of individuals with regular status more than quadrupled over the past 12 years, and more than 1,000 positions must be filled by school boards over the next 13 years. The survey data also confirm that there is still a wall between the youth and the adult sectors. Conducting the survey on behalf of the adult education and occupational training committee (TRÉAQFP), the authors provide at the end of their report the following content to incorporate in an adult education instructor program:

- Lifelong learning;
- Characteristics of adult clients;
- Adult education environment;
- Workplace mentoring;
- Support and guidance for the adult learner;
- Recognition of prior learning and, more specifically, the recognition of soft skills;
- Skills assessment;
- Diagnostic evaluations for clients enrolled in literacy training;
- Interrelationship between the various adult education partners;
- Legislation governing social and family life;
- Organizing an adult education centre.

Bessette (2000) also looked at instructors for adults. She chose to explore the use of the reflexive analysis method drawing on the experience of literacy-training personnel. The outcome of this study was to enhance awareness among instructors having participated in the

experiment, primarily as regards the necessity to distinguish between the actual needs of the population and their own projections as to these needs.

Finally, Solar (2002) and Voyer (2002) also paid attention to adult training instructors. In fact, Solar's work (2002), entitled *Une place au soleil pour les formateurs d'adultes: une suite sans variation*, constitutes one of the chapters in Voyer's book, one of the rare monographs (if not the only one) on the subject in Quebec. In her document, Solar showed that the specific focus of these professionals has been diluted; their field has shrunk along with the disappearance of several andragogy or adult education programs; and their status generally remains uncertain. Voyer (2002) presented in his book the work of several researchers, including Bourgeault, who discusses this fragmented profession; Wagner, the professionalization of adult-training instructors in Quebec school boards; Bouchard, the qualification of adult educators in Quebec; Messing and Seifert, when uncertainty meets diversity *in the work of female adult-training instructors in Montreal*; Voyer, *the career paths of adult-training instructors in intermittent employment situations*; Girard, *training for workplace facilitators and accreditation in Quebec's tourism industry*; Fontan and Schendel, *training in a community setting as an alternative practice lacking social recognition.* Voyer concludes by examining the path to take in order to achieve social and professional recognition for adult training instructors. According to the author, this question has yet to be answered.

In their study, Messing and Seifert (2000) explored in-depth the atypical and difficult working conditions of personnel in the adult general education sector. This work deals specifically with the work of women who give courses on literacy training, this area being almost exclusively the domain of women. On average, these professionals have some 15 years of experience with fixed-term contracts that can be terminated with only five days' notice. This uncertainty causes a variety of problems, including the constant worry about job retention; vulnerability in the face of criticism; the unending challenge of adapting teaching methods to meet learners' needs; the choice of proper teaching techniques to meet the diverse needs of their clients; the lack of suitable literacy-training material; and the difficulties of managing a classroom of adults who are often perceived as being immature individuals and laggards. This in turn gives rise to a climate of mistrust between colleagues, as well as individualistic strategies and a distancing from management. According to the instructors, job insecurity has a deciding influence on their ability to maintain a satisfying family and social life.

### 2.6.3. Documentation

Only one study explores documentation, more specifically university libraries. Solar and Ndejuru (2002) examine the impact adult students have on the libraries of postsecondary institutions. These clients, frequently attending on a part-time or e-distance basis, and most often enrolled in interdisciplinary and professional programs require changes in the very design of libraries, which to meet their needs, must be more accessible, increase document availability, by making greater use of the advantages of technology.


**To summarize this section,** one finds it deals more with resources used by individuals involved in the planning and delivery of training activities than by adults for learning purposes. Many studies under the theme of resources focus on ICTs, as learning tools, in an attempt to identify the degree of Internet use by the Canadian population, as well as the use of ICTs in distance learning, in both education and literacy training. Knowledge at this level is being consolidated and we now realize that retention and success in distance learning are achieved through a combination of several strategies.

Our knowledge of training personnel is still limited, however, even though a little more is known on the working conditions for those involved in delivering training activities to adults. Most often, these conditions are uncertain, and the status of those concerned is just as unstable in academic institutions as it is in community groups. Although these individuals usually have a

university education, this rarely translates into social recognition. The most gratifying aspect of the job for these people is the success achieved by adult learners. Nevertheless, it is surprising that more studies on this matter do not exist since, in comparison, documentation on teachers in schools is considerable. Now is undoubtedly time for this issue to be explored further.

Lastly, we examined the issue of document sources, but from one angle only—that of the role of libraries, now that adults are attending university in increasingly higher numbers. Research is required in order to provide a better understanding of adults' information and knowledge search modes, in both a structured and an unstructured context, taking literacy levels into account. Research on participation should undoubtedly also be further investigated in order to highlight methods of funding for learning activities or conducting new ones. No data on networks was found other than the desire to build some for the literacy-training community.

Although there is some information in this area in the field, it is however insufficient. Incorporating research on independent learning into the CDÉACF database should, in part, help meet this need.

## 2.7.    Participation

Included under the heading of "Participation" are sixteen headings, six (6) of them providing information on participation in Canada, and two (2) on participation in Quebec. The others cover specific groups: the least educated (4); women (2) and adults in post-secondary programs (2). They will be discussed in that order.

**Figure 9 – Participation and Related Sub-Headings**
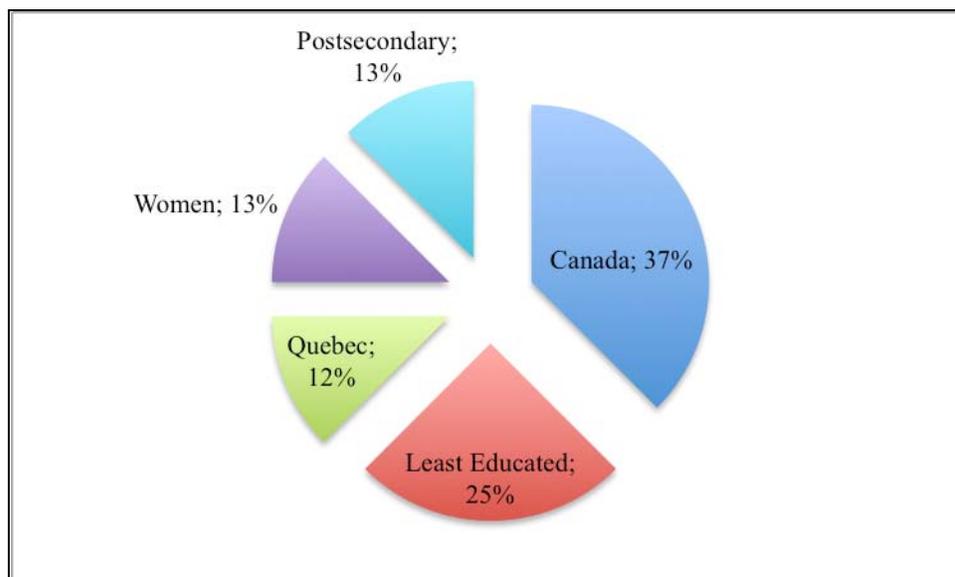


### 2.7.1.  A Description of Participation in Canada

Adult participation in training activities is described in several important studies. A survey conducted by Statistics Canada in 1997 revealed that individuals with very high levels of education are involved in 7.5 times as many such activities as the least-educated; that the main educational method used is still classroom instruction; and that computers remain underutilized. Educational institutions accounted for 75% of the learning supply, and learning increased by 40% in 1997: adults devoting an average of 209 hours per year to learning, as opposed to an average of 149 hours spent on studying in 1991. Quebec's participation rate is

lower than that of Canada: 23% of Quebecers attend training activities, against 26% of Canadians in general. Adults, at a rate of 45.5%, claim to be able to transfer their learning to their work and life situation; the figure rises to 54.8% if only job-related learning is considered. The study shows that, of all Canadians who stated they had not participated in any learning activities in 1997, 87% had not even considered enrolling. The question then becomes: how can a true culture of learning be developed, especially in a modern, progressive society wanting to be defined as a knowledge-based society? This question raises even more concerns when considering the drop in participation among the 35-44 year age group, as well as the fact that Quebec has one of the lowest participation rates of all the provinces, this being explored further with the research of Doray *et al.* (2004).

This decline in participation is highlighted by Hum and Simpson (2002). They based their analysis on Statistic Canada's Adult Education and Training Surveys (AETS) from the 1990s, which were performed jointly with labour force surveys. There was, indeed, a drop in participation in adult training between 1990 and 1998—a decline slightly more noticeable among men (from 41.8% to 34.6%), while education levels among women at university actually increased.

A study by Myers and de Brouckner (2006a), of which a summary is available (2006b), presents a new update of what is known about the "too-many-left-behind" in the Canadian education and adult-training system. It is a known fact that the least-educated are less inclined to engage in training activities as adults. This report documents the availability of structured learning opportunities for adults. Factors that have an impact on participation rates among the least-educated (and thus the least-qualified for such opportunities) are also determined. Several complex, interconnected factors can influence the participation rate of such individuals: economic growth; lack of interest, confidence, or awareness; an unresponsive learning environment; cost; and insufficient time—these last two being the greatest barriers according to respondents. Often low participation rates are explained as lack of interest; however, the latest survey data indicate this unmet need of those with the lowest levels of schooling is still considerable. The authors believe that had this need been met, the participation of individuals without a high-school diploma would have doubled. The aim of the study was to identify the shortcomings of adult-learning systems, and recommend measures to offset them, this analysis focussing primarily on the situation Alberta, British Columbia, Nova Scotia, Ontario and Quebec.

In 2001, Tuijnman and Boudard compared participation rates for adults in North America with those of 21 other countries. Part of their study examined English- and French-speaking Canada together. These findings are often compared with those from the United States, the figures being 35% in Canada and 39% for our neighbour to the south. With a participation rate of 56%, Finland has achieved almost mythical status. In both Canada and the United States, adults participate, mostly for work-related reasons: the typical profile of the most active participant is a young person employed by a large corporation. U.S. employers help defray training costs at a higher rate than their Canadian counterparts. The indifference to training persists, however, at the rates of 47% for Canadians and 46% for Americans despite all efforts made in North America.

Rubenson, Desjardins and Yoon (2007) recently compared IALSS 2003 and IALS 1994 data. Their results show that participation stagnated during the period between the two dates: Canadians did not attend any more courses in 2003 than in 1994. In addition, "initial formal education and foundation skills such as literacy skills as measured in IALS and ALL are major factors influencing the opportunity to engage in some important forms of informal learning" (p. 55). Furthermore, at the same time that training for the unemployed was being curtailed, direct financial support from government sources declined considerably. This study, like many others, highlights the importance of bolstering learning policies for Canadian adults in order to maintain the economic benefits conferred by human capital via the expansion of the post-secondary education system.

### 2.7.2. A Description of Participation in Quebec

The research by Doray, Labonté, Lévesque, Motte and Bélanger (2004) is another comprehensive study where data from Statistics Canada's 1997 AETS were used to conduct an in-depth analysis of the situation in Quebec. This exercise gave rise to eight briefing notes on:

- *Participation in adult training: the Quebec and international context (Briefing Note 1)* (Bélanger P. *et al.*);
- A *comparative Quebec-Canada analysis of participation in adult training* (Labonté *et al.*) (Briefing Note 2.);
- *Factors behind variations in participation in adult training in Canada in 1997* (Doray *et al.*) (Briefing Note 3);
- *A portrait of adult training activities in Quebec and Canada* (Bélanger *et al.*) (Briefing Note 4);
- *Unmet training demands* (Doray *et al.*) (Briefing Note 5);
- *Atypical participation: potential new avenues* (Bélanger *et al.*) (Briefing Note 6);
- *Participation of women in adult training: an evolving situation?* (Doray *et al.*) (Briefing Note 7);
- *The unique nature of adult training in Quebec: briefing note* (Bélanger *et al.*) (Briefing Note 8).

In the latter, the authors emphasized:

"…the disjointed character of adult training organization. It is empirically impossible to replicate the circumstances in this field by relying solely on institutional statistics—i.e., the traditional method used for monitoring the initial education system. In adult training, instructors are too numerous and participation models, too fragmented. One need only consider, for example, the different areas of training: workplace training, occupational training, continuing education for members of professional corporations, adult participation in post-secondary education, literacy training, popular education, and so on." (p. 3) [TR: translation]

The authors also stress a certain number of factors that may explain the differences between Quebec and Canada:

- The significant development of participation in adult training in Quebec despite the undeniable decline in the participation rate between 1991 and 1997 as noted by Hum and Simpson (2002) for Canada as a whole;

- Different relationships between workplace training and independent learning, the latter being more highly valued in Quebec, even though work-related motivations prevail over non-work related reasons, and shorter forms of training, over longer ones;

- Education that continues along the same line as the initial training and perpetuates the inequities produced in this context;

- A different logic for on-the-job training participation that is less related to organizational size and characterized by lower participation of older people, which raises the issue of access to educational resources;

- Incentives and actionable policies encouraging a minority of adults with lower levels of schooling to participate, especially those who are unemployed (this sector having a higher participation rate than that of the employed population). This trend is undoubtedly linked to the increased role played by school boards and community groups.

The discrepancy in the participation rates between Quebec and Canada must, however, be qualified as to variations in duration. If the percentage of participants is lower in Quebec, the average length of training is conversely significantly longer. In Quebec, training program*s*

*leading to* accreditation have an average duration of 523 hours, as compared with 479 hours in the rest of Canada. The length of the training sessions are 26 and 22 hours, respectively. The higher Quebec figure is attributable to self-paced training programs, much more common in Quebec.

The authors conclude with observations to the effect that, since 2002, Quebec has had a multi-departmental Government Policy on Adult Education and Continuing Education and Training, a fact which demonstrates the government's determination to make adult training an important lever for social development.

The book on continuing education edited by Solar (2005) also presents data on adult participation, especially in regards to women. Several chapters deal with the situation in Quebec, especially that *by* Doray and Bélanger on *the situation of women in adult education in Canada and Quebec,* in which the authors review data contained in Briefing Note 7 above; that by Solar, which takes the form of an *analysis of submissions to the Quebec government* at the time the adult education policy was being developed; that by Gervais and Solar, which establishes a profile of the Relais-femmes research group as *a feminist response to the continuing education needs of the women's movement;* and that by Leahey on *limited access to continuing training for women with children.*

### 2.7.3. Participation of Less-Educated Individuals

Many studies (8) take a look at specific groups of individuals. In this section, four (4) that relate to the least-educated are examined.

Gaudet (1997) examined the Charlevoix literacy-training department (Formation en Alphabétisation de Charlevoix) in the province of Quebec to establish a profile of the perceptions of clients aged 50 and over with respect to community literacy training—a target audience with little inclination to participate. The study sought to identify the factors influencing the decision of adults aged 50 and older to enrol in a training program. The findings showed that respondents do not see the usefulness of community literacy-training activities. They are not very familiar with the services offered, and are uninterested in—and therefore unmotivated to take part in—training workshops aimed at improving their reading and writing skills. In fact, personal and social development skills are what they need (learning how to use a computer, improved communication skills within a group, etc.). Training activities more in line with these concerns must be developed.

Two studies were initiated in the literacy-training environment. Nombré and Bouffard (1997) established a profile of community literacy training in Quebec, examining the issue from several angles: evaluating attendance in the groups, the profile of participants, and qualifications of instructors. This document results from a survey of 114 of the province's 125 community literacy-training groups. According to the report, 4,264 people were enrolled in literacy-training groups in 1996-1997. Most of these individuals were over 26 years of age, single, and living on social assistance or without income; the others were on unemployment insurance or retired. The client groups consist of almost 60% Women, and 20% immigrants. The drop-out rate for literacy-training workshops is approximately 10%. There are some 1,300 instructors in Quebec, most of whom (1,000) work as volunteers. Their educational background varies between a high school diploma and a Master's degree, although 60% have an undergraduate degree. Trained primarily in the field of education, many of them have attended professional development sessions.

The second study, by Filion, Duval, Guberman, St-Germain and Rocheleau (2003), considered the importance of democracy in community action groups. Despite the strong convictions of executive directors and other stakeholders favouring democracy, the research finds their clients have: no interest to participate, comprehension problems and fears. It seems in fact that instructors' efforts do not meet the needs of participants. This research undoubtedly led Filion

(2005) to do a Master's thesis on the subject discussed in the section on nature and fundamentals.

Lastly, Roy and Coulombe (2005) look at the situation of basic skills training in Quebec in their study with a description of the adult populations targeted by the basic skills training activities—i.e., adults who do not hold a high-school or trade-school diploma. Their research was based on data from the 2001 census, indicating that about 1.5 million people have not completed Grade 9, and that the percentage for Aboriginals is 75%. Fewer boys have a diploma than girls, and the 10% graduation rate discrepancy previously observed between the sexes remains unchanged. This study aims to benefit individuals working in the education system and their partners, to help improve service delivery and successfully carry out activities to raise awareness and to recruit.

### 2.7.4. Participation among Women

Two studies in this field focus on women: Gaudet (2005) and d'Ollagnier and Solar (2006), and both, as concerns Canadian research, explore specifically the situation at the postsecondary level. Three articles on the topic in an issue of *Éducation et francophonie* coordinated by Gaudet (2005) are worthy of mention: Mujawamariya and Sethna study the University of Ottawa and its challenge dealing with equity in employment and education issues and show that women are increasingly better represented but female students and professors continue to come up against a type of "glass ceiling"; Tremblay discusses communities of practice (a differentiated analysis by gender and learning style), and shows that women have been able to take advantage of experience with such communities in order to learn; and finally Cloutier targeted gender-based social relationships, class, race, and post-secondary achievement, concluding that post-secondary education for women provides opportunities for emancipation and social change. The book by Ollagnier and Solar (2006), entitled *Parcours des femmes à l'Université: perspectives internationales*, includes only one chapter on the situation in Quebec, where feminist knowledge and the hiring of feminist university professors is discussed. After a critical look at these aspects, Solar is concerned with the non-renewal of positions and programs in several universities that is depriving women of participation in the learning, development and transfer of specific knowledge.

### 2.7.5. Adults in Post-Secondary Programs

Two studies are discussed in this sub-heading—one on non-traditional university students, and the other on employed individuals who return to school. Bonin and Auclair (2004) who wrote on the ACFAS conference examined the characteristics of the typical non-traditional student at the Université du Québec in Trois-Rivières. These individuals are over 25; enrolled in a part-time certificate program; account for 75% of the first-generation university student population; have taken a break in their studies for more than six months (and more than three years in over 30% of the cases); work more than 15 hours per week (or full-time in 40% of the cases); and work towards achieving a degree, but not necessarily on an uninterrupted basis. Non-traditional full-time students are pursuing a degree in order to access a new profession or career, while the aim of their part-time counterparts is to improve their working conditions or upgrade. For non-traditional students, the main conditions for success (or graduation) are as follows: wanting a certificate or degree, passing all courses in the first semester, wanting to study on a continuous basis, and wanting to attend university full-time. The graduation rate is approximately 60% for non-traditional students at the undergraduate level; between 40% and 50% for those in certification programs; and 80% for traditional students. Now the question is if university education is better-suited to traditional students.

Zhang and Palameta (2006) explored the case of employed individuals. Over the periods covered by their study, they observed that 14% of this population continued with training, and 8% achieved a post-secondary certificate. According to the authors, age, education level and marital status seem to be the determining factors in the decision to return to school. The study

also showed that earnings for individuals with a post-secondary degree increase significantly, and that younger workers (those aged 17 to 34) are more inclined to furthering their education than their older counterparts (those 35 to 59). Single women do so more often than married women, and are twice as likely as divorced women to obtain a post-secondary certificate.

**To summarize this section**, there is a major body of data on adult participation in educational activities which yields considerable information such as the whys and wherefores of participation, and the lower participation rate in Quebec when compared to the rest of Canada. However, there is no real data on Francophone Canadians, and documentation is also lacking on the systemic and cultural differences between Francophones and Anglophones. Maybe French-speaking Canadians don't participate as much in such activities (which, given the relationship between literacy levels and participation, is highly likely), but when they do take part, they privilege longer-lasting activities.

A worrisome observation, however, is that, in a knowledge-based society mostly concerned with the leitmotiv of lifelong learning, participation is on the decline, while the opposite was anticipated. The increased school enrolment of young people in relation to older adults does not suffice in answering this question, and further research must be conducted, even though major works such as those by Doray, Labonté, Lévesque, Motte and Bélanger (2004) for Quebec provide a wealth of information.

## 2.8.    Outcomes

The purpose of the "Outcomes" heading with its 16 studies, is to inventory research on the impact of learning. It explores the relative diversity of outcomes from sometimes very different perspectives. This research is broken down into three sections: social and economic outcomes, with eight (8) references; ICTs, with four (4) references; and the effects of training activities, which also involves four (4) documents.

**Figure 10 – Outcomes and Related Sub-Headings**
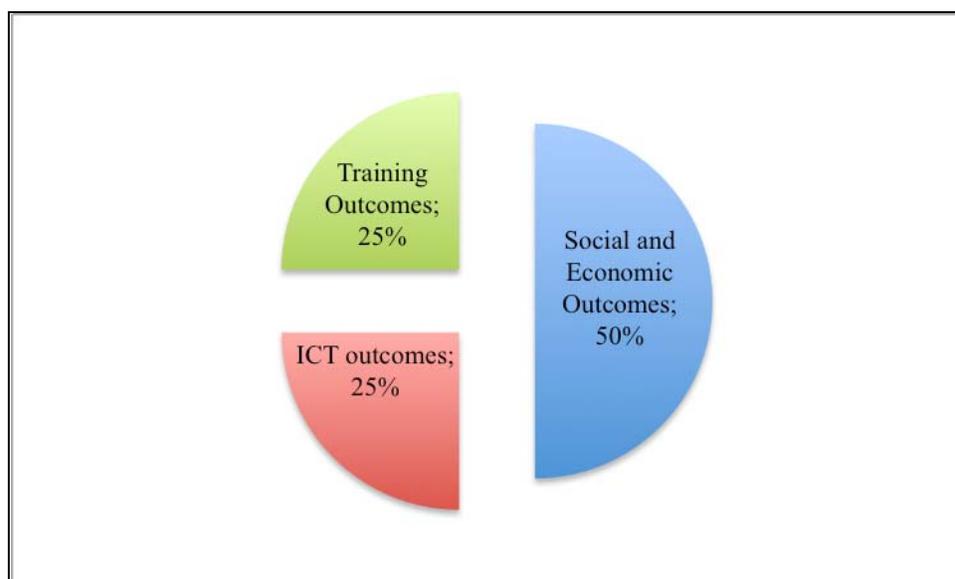


### 2.8.1.  Social and Economic Outcomes

Several works (8) deal with social and economic outcomes. Kapsalis (1998) wrote one that examines the relationship between schooling, work and literacy, while attempting to provide an

in-depth look at the employability of social assistance recipients aged 26 to 65 years. He goes beyond the concept of schooling to take greater account of actual literacy skills. From the IALS 1994 data which were restricted to people aged 26 to 65 given the school status of youths, he observes that literacy is a strong predictor of employability. Where on the one hand, the more highly educated an individual, the better his reading skills, the more likely he or she is to be employed; on the other, annual income for full-time work is more strongly correlated with literacy level than education level. This could be explained by the fact that literacy, as measured by the IALS, provides a more realistic idea of education level and quality, as well as of frequency and diversity of reading practices used at work and at home. Overall, social assistance recipients (SARs) have a lower level of education and literacy and represent a relatively high percentage of single parent women aged 26 to 35. Even with an equal level of schooling, SARs have a lower literacy level than non-SARS; maybe because the quality of education for SARs is poorer, and the absence of employment over a longer period of time causes a decline in literacy. This would reflect the "virtuous" circle between employment and literacy, whereby a higher level of reading skills leads to more work, and more work enhances reading abilities.

Finnie and Meng (2006) attempted to assess the importance and outcomes of functional literacy (reading and math skills) in high-school drop-outs on the labour market. This Statistics Canada study showed that such skills have a significant impact on the probability of being employed, as well as on hours and weeks of work. This is true for both men and women. Although these skills have a strong influence on men's income, the same cannot be said for women. The authors report a decline in occupational mobility for several positions: university graduates often doing jobs high school graduates could do, and the latter doing jobs customarily held by drop-outs. Consequently, there is greater competition for positions that require minimal skills. The report suggested, however, that those at the bottom of the economic ladder are not completely trapped in a secondary labour market where few options are available. Instead, skills issues and helping such individuals increase their literacy and numeracy abilities could be an important means of improving their labour market opportunities. The study concludes by suggesting that high school curricula promoting literacy and numeracy skills could have a positive impact for those at the lower level of entry on the labour market, much in the same way training programs aimed at drop-outs help them develop basic skills and substantially improve labour-market outcomes for these individuals.

In his Master's thesis, Audet (1997) focusses more on women with children, attempting to identify the social and economic costs evolving from failure to master reading and writing, and the benefits they gained from completing a literacy program. The illiteracy of these women is explained by poverty and economic exclusion, difficulties in assuming the role of parenting, the partial or total lack of integration into the community, and psychological factors (low self-esteem, dependency, stress, marginalization, etc.). The literacy-training process did not enable research subjects to make significant economic gains, although quite noticeable progress was achieved on a psychological and social level. These women were motivated to take literacy training mostly to help their children with their schooling; they were making every possible effort to ensure their academic success.

Continuing this exploration of the economic benefits for women, Osberg (2000) examined the effect of econometric performance on reading skills. He concluded that, particularly for males, much of the economic return yielded by education is due to literacy skills (perhaps as much as 40% to 45%). Although education yields a higher overall rate of economic return for females, it is not due to literacy to any great extent. After processing the data, the author concludes that literacy does indeed have an influence on earnings, insofar as this involves a wide range of metrics.

Labrie *et al.* (2000a, 2000b) explored a different aspect, and in a research report and again in a final report, they observed that the process involved in globalizing the economy requires the development of customer services. That, in turn, implies the need to pay more attention to

communication skills (mainly verbal). Bilingualism then becomes an asset and may benefit Franco-Ontarians. However, the research team noted that the use of language resources is still under-valued. In actual fact, bilingual employees are confined to providing customer service because of their language abilities, which, when all is said and done, limit their opportunities for promotions to positions involving more professional expertise. One of the characteristics of Francophones not only in Ontario but elsewhere in Canada, is the ability of alternating between French and English. Laflamme and Bernier (1998) analyzed this situation and asked how this minority population experiences its rapport with reading and other print material and electronic media. Their study, a continuation of *Souvent en français: rapport de l'enquête sur les habitudes de lecture et d'écriture des francophones de l'Ontario*, also aimed to compare the reading habits and literacy levels of Franco-Ontarians with those of Francophones not living in a minority environment and of other Canadians. The research shows that while the language spoken by people taking literacy training is French, English is used for electronic media (radio, television and music). On the act of reading, respondents indicate reading the newspaper at an average rate, but more often read books in French. In general, learners do not report writing much, but when they do, it is in French. Generally, they have an open attitude toward literacy, noting here that literacy levels among Franco-Ontarians are comparable to those of other Francophones in Canada. The study findings showed that, according to gender, age and region, reading and writing practices will differ. For example, women engage in more literacy activities and read more than men. People between 26 and 55 tend to read and write more. Newspapers are most frequently read in Ontario, and books are least read in Quebec. Ontario Francophones boast the strongest literacy activities, while Francophones from the Atlantic Provinces have the weakest.

In regards to reading and the rapport with medias among Franco-Ontarians, the survey suggested that exposure to electronic media (radio, television, music and computers) has only a slight influence on reading. It is impossible, therefore, to declare systematically that the more one watches television, the less one reads. According to the survey, media exposure varies primarily in accordance with the socio-cultural characteristics (occupation and education) of Franco-Ontarian users. For example, the higher the education level, the more they read. As well, the higher the level of occupation, the less time is spent listening to the radio and watching television, and the more time spent on the computer.

From yet a different standpoint, Rousseau (2007) coordinated a special issue of *Éducation et francophonie,* a virtual magazine, on the social and occupational integration of young people. Young adults are the subject of several articles. Under the first theme—an examination of social participation among young people with learning difficulties or disabilities—articles discuss, in particular, the perception of young drop-outs, drop-ins and students at risk in relation to their future; labour-force participation among young adults who are disabled or have significant learning difficulties; the transfer of skills developed in a context of training leading to qualifications; and the workplace for young people aged 16 to 18 who have major educational difficulties. The theme of academic paths and labour-market entry covers the social and occupational challenges of integrating young people in difficulty who spent time in a youth centre; the often complex occupational paths taken by young people that characterize the training-employment relationship in today's world; and the link between geographic mobility and school-to-work transition for the least-educated young people. The third theme "Parents, students, teachers: actors in success" consists of three articles. The first deals with preventing illiteracy among young people with school-aged children by using story-telling as a social and personal development tool. The second examines the language skills of young people aged 16 to 18 enrolled in a training program leading to qualification, and the third, with fostering trust among teachers, parents and young people with learning difficulties.

### 2.8.2. ICTs

Four studies involve ICTs. In her doctoral dissertation, De Guire (2007) used a hybrid approach—i.e., several teaching-learning methods (classroom discussions, discussion forums,

written tests and portfolios)—that combine in-class education with ICTs. She stresses the effects of this approach on metacognitive knowledge and learning regulation. Thériault, Vautour and Cadotte (1999) discussed an exploratory study by the *Fédération canadienne pour l'alphabétisation en français* (FCAF) which examined the benefits of computer and Internet use for literacy-training participants via chat rooms. All learners found the Internet useful in their everyday lives (paying bills, saving time, saving on long-distance phone calls by using e-mail, etc.). These individuals also felt computer use improved their reading abilities, and a large majority discovered improvements in writing.

The *CLé* learning centre (2003) has used ICTs for several years, and offers technology training programs. Wanting to know more, the agency organized the study with a view to enhancing knowledge on the problematics of computer technology in literacy training, describing the related pedagogical activities, and analyzing its influence and usefulness in learning. For learners, computers provide an opportunity for enjoyment, despite bugs and slow performance; their use promoting self-esteem. Additional motivating factors are the increased employment opportunities, the use of ICTs in performing everyday tasks, greater potentiel for creativity, self-confidence and identifying with others. Participants enjoy attending courses where they also get to know their peers. Furthermore, despite the fact that computers are tools uded for reading and writing, that facilitate the correction of spelling and grammar mistakes and the submission of a clean copy, 61% of participants declare to still prefer writing by hand, as well as reading from a hard copy (especially longer texts). On the other hand, computer use promotes skill development in French. Participants are encouraged to upgrade their training, and learners appreciate being able to exercise their independence in learning, and to continue that learning at home.

On a more quantitative level, Veenhof, Clermont and Sciadas (2005) did a study for Statistics Canada that examined relationships between adults' literacy skills and ICT use based mostly on the IALSS 2003. The research team starts by describing access to computers, the Internet and other technologies and it continues with an exploration of the relationship between ICT use and literacy skills while establishing a profile of ICT use in keeping with socio-demographic indicators such as age, gender, education level and literacy skills. The document presents data for Canada, provinces and territories included, as well as for five other countries, making interprovincial and international comparisons possible. The findings corroborate what is known as the "digital divide"—an aspect already well documented—and reveal that individuals who do not use computers are also those who have weaker literacy skills. This observation is exacerbated by the fact that only 29% of these individuals hope to use a computer in the coming year. While Internet expansion in Canada has been quite fast, rising from 7.4% of households in 1996 to 64% in 2003, individuals with the weakest literacy skills are deprived of the benefits provided with ICT access.

### 2.8.3. Training Outcomes

The outcomes of training activities are the subject of four studies. Two of them deal with the issue from a community standpoint, while the others examine it in relation to the education system.

Bélisle (1998) presented research data on the positive effects of the "Our Strong Skills" (NCF) workshops, the tool developed by the community to help adults recognize their skills, starting with women with low levels of learning not in the labour force, and transposed after to a mixed population. The NCF workshops helped participants change their attitudes toward others, develop greater self-esteem and self-knowledge, undertake a process of internal reflection and acquire vocabulary. They were also able to develop or consolidate their generic skills and put their strengths to use in experiencing new situations. More specifically, participants made definite, significant changes in their personal lives (empowerment in home life, self-affirmation in a family setting as well as in a placement or job search setting).

Brousseau, Jobidon, Panych (2002) looked at the outcomes of participation in literacy-training workshops offered by the Ebyôn community literacy-training group. Their findings confirmed some assumptions on improving the reading and writing abilities and transfering them to daily life. The findings also attest to an increased community commitment among participants, as well as growth at the personal, social, economic and cultural levels. The discussion unfolding from these findings highlighted various crucial components of the literacy-training process, in particular the fear and mistrust felt by most individuals before enrolling. Testimonials from participants also reflected the stress they experience when the workshops end—stress created by the obligation of having to cope with a series of new, unfamiliar situations. In this regard, the authors emphasized that literacy-training groups and the community must support these individuals at a greater level as they transition into society.

With respect to the Anglophone population in a literacy-training context, Ouellette (1997) examines the conditions for success in training activities provided in English by Quebec school boards. The data collected on adults show that literacy training has a positive impact on their personal development, transition into the working world, family relationships, and perception of life and the world. Instructors for their part, indicate that practices to enhance adult success consider the following aspects: self-esteem, empathy, trust and encouragement, the use of a genuine andragogical approach that provides an opportunity for learning about success, and a stimulating, age-appropriate environment. In this study, the author demonstrated that successful literacy training is multidimensional, and can be measured by the progress made by participants (as defined by the latter), as well as by the decision to enrol in such training.

Finally, Lévesque (1997) examined the impact of an informal university course on student perceptions and attitudes on French didactics. The focus here was informal teaching centred around the teaching of writing making it possible to show the positive outcomes of a learner-oriented approach. This doctoral dissertation showed that students benefit from living the process, and experimenting and acquiring transferable learning strategies. The paper highlighted the need to demystify the writing process and use it in a specific communication project in order to foster in the students a taste for writing and feelings of competency.

**To summarize this section**, research indicates that low literacy levels have considerable effects on the personal, social and economic fronts. These are generally accompanied by low self-esteem, social exclusion, and low earnings. What is more, these individuals do not see the advantage of participating in training. In fact, participation appears to translate into workplace improvements only for the highest literacy levels. Gains on the labour front seem to be less apparent for people with low levels of schooling or literacy levels. The gains for women seem to be equally less obvious. Progress on the personal front is the element most often highlighted by studies on individuals in literacy levels 1 and 2. There are definite improvements in self-image and self-confidence combined with an enhanced ability to transition into society. This is followed by enhanced self-esteem and improvement in the ability to achieve one's role in society. These data confirm the primary role played by literacy-training centres and community groups.

## 2.9. Prior Learning Recognition (PLAR)

For nearly 30 years, adults have been demanding prior learning recognition (PLAR) so they did not have to relearn what they already knew—hence the importance of this theme. Unfortunately, only seven documents were found, of which, three deal with prior learning and skills recognition in general, as a system, while the other four look at adults and agencies from the standpoint of recognizing learning.

**Figure 11 – Prior Learning Recognition and Related Sub-Headings**
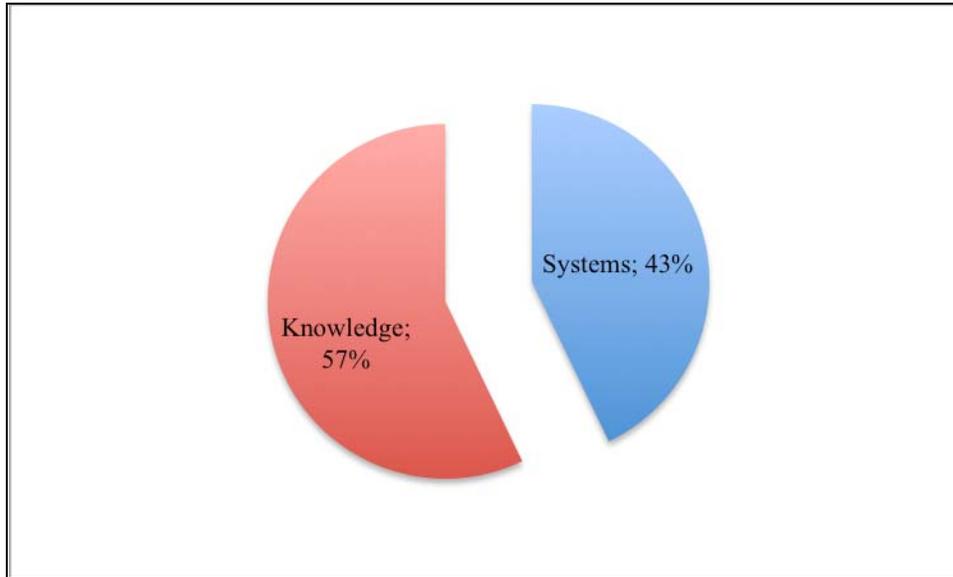


### 2.9.1. PLAR Systems

In his research, Talbot (2005) inventories PLAR documents and practices on behalf of the *Centrale des syndicats du Quebec* (CSQ), and takes a critical look at what may be called a double if not a three part effort: first, by the education system, then by the working world, and finally by the immigration services. There is also within the world of education, a triple effort corresponding to the three education networks.

The study by Solar-Pelletier (2006), on the other hand, compares PLAR systems in France and Quebec, in order to identify their strengths and weaknesses through a more specific examination of legislation, roles of social players, established procedures, and statistics. Universities are a key target. The sources of information consulted are mostly governmental and the overall data are collected from scientific studies on the subject. The findings isolate several differences between the French and the Quebec PLAR systems. In France, the PLAR framework has some headway compared to Quebec, mainly because it has been legally supported since the 1970s, whereas in Quebec, the policy was established in 2002 (Government of Quebec, 2002a). Nevertheless, both approaches show similarities, both in terms of barriers and procedures: the two French-speaking jurisdictions appear eager to innovate in the area of human resources development and training.

Bélisle (2004) is the last research document examined. This more systemic study was conducted on behalf of the adult general education branch (DFGA) of the Quebec Education Department, to establish a profile of practices in OECD countries in regards to the learning associated with basic skills. The literature survey looked more specifically at recent documents discussing PLAR policies, programs and approaches for adults without a high-school diploma. The results of this research project helped the inter-departmental committee assigned to establish the third measure on prior learning recognition and skills introduced in the Government of Quebec's *Action Plan for Adult Education and Continuing Education and Training* issued in 2002 (2002b).

### 2.9.2. Recognition of Knowledge

Four studies focus on experiential or practical knowledge: all four involve personnel who work with adults involved in the labour market. Researchers from the *Centre de recherche et*

*d'intervention sur l'éducation et la vie au travail (*CRIÉVAT) at the *Université Laval* directed this research: Filteau, Leclerc and Bourassa (1999); Leclerc, Bourassa and Filteau (1999); Filteau, Bourassa and Leclerc (2001); and Leclerc, Bourassa and Filteau (2002). Using a similar framework and approach, they analyzed expertise developed by stakeholders in governmental employability services, external employment services, social and occupational integration services, as well as local employment centres. These studies revealed certain discrepancies between the official mandate of these stakeholders and what they must accomplish on a daily basis.

**To summarize this section**, collected data on prior learning recognition is rather scarce. Three studies were found on such systems and four more of the same, on experiential and practical knowledge. Nothing was available on existing practices, other than those in use in Quebec in the areas of occupational and technical training or general basic education. In our opinion, a systematic review of the literature would uncover new research. The actual examination of the current database, leads to believe that it could be developed further in order to provide studies on practices; the impact of such practices; the number of requests for recognition; the conversion of the position title; and the skills transfer. As this field is still relatively unexplored, there is room for creativity and innovation.

## 2.10.    Content

The "Content" theme refers to the knowledge conveyed in adult learning activities from the viewpoint of stakeholders, whether they are theoretical or practical. This section covers studies related to personal development, social issues, family challenges, culture, and social investment. Given that only four (4) documents are included in this category, it speaks to the lack of knowledge on the learning that interests adults. Clearly, a gap needs to be filled.

Basing her dissertation on an in-depth analysis of the café-school phenomenon, Henri (1997) looked at the private logic that underlies the phenomeno-structural method and highlights the organizing principle of student subjectivity in the learning process. The content of the student approach then becomes self-awareness. In so doing, Henri has participated in the development of a self-analysis method for private logic.

Also included under this heading is a report by Lalonde (2001) drafted on behalf of the Canadian Commission for UNESCO. Entitled, in English, *Learning Content and Strategies for Living Together in the 21st Century: Report of Canada by the Council of Ministers of Education, Canada*, it contains information on the educational choices made by Anglophone and Francophone adults in Canada, especially in regards to Quebec, Ontario and New Brunswick. This work constitutes a response to the International Survey in Preparation for the Forty-Sixth Session of the International Conference on Education, held in Geneva, September 5-8, 2001.

The last two studies have been classified in the "Content" category for language reasons. One, by Durandisse (1999, offers a summary of the research conducted by Sylvie Brulé in 1998 at Montreal's *Centre Haïtien d'animation et d'interventions sociales* (CHAIS). Entitled *Les actions auprès des personnes immigrantes sous-scolarisées et la communauté haïtienne de Montréal*, the study highlighted the importance of Creole in the teaching and learning of literacy knowledge. The other, by Dancose and Richard (2007), reported on the findings of five discussion groups in Ontario, Manitoba and New Brunswick on the *Perceptions des intervenants en français langue seconde sur l'utilisation des Niveaux de compétence linguistique canadiens 2006,* which were the focus of the discussions. It was possible to further investigate the concept of language skills through this study.

**To summarize this section**, very little—in fact, too little—research has been done on the knowledge that adults wish to acquire, or on knowledge that is necessary for learning. This theme also needs to be further developed.

## 2.11. Other

Of the 227 references in the adult-learning database, only three have not been classified under one of the headings developed for this analysis. The first is a summary by Solar, Solar-Pelletier and Solar-Pelletier (2006) on literacy-training research. This synthesis covers all the research in the *Répertoire canadien des recherches sur l'alphabétisation en français* (RÉCRAF) from 1994 to July 2005. Data from the directory can be broken down into nine themes: adult literacy; accessibility and retention; literacy, numeracy and basic skills; Aboriginal literacy; literacy and employment; literacy and health; literacy and technology; family literacy; and learners and instructors, both male and female. As the focus of analysis differs from that of this paper, some of the data are complementary.

Another work focusses on seniors: Statistics Canada's publication by Turcotte and Schellenberg (2007). Their research did not specifically look at learning, but rather the well-being of seniors. We mention it here because it contains a wealth of information on this segment of the population, about which so little is known. It also contains a section on continuous learning.

Last, we must mention the *Journal of Applied Research on Learning* (JARL), published by the Canadian Council on Learning (CCL). This is a very recent publication but its articles cover various aspects of interest to the CCL, including adult learning. In the short term, therefore, it would be appropriate to include electronic articles issued in French on this subject.


**To summarize this section**, while major research and reference tools on adult learning serving the research community do exist, effort and time will have to go into classifying all the data available. We continue to believe this can be done in conjunction with research development.

# 3. Research Subjects and Learning Types

To gain a more precise idea of the status of research on adult learning, it was considered appropriate to code studies based on the adult client group and the learning types. This section presents the data that pertain to this issue in a mostly graphic format.

### 3.1.    Adult Research Subjects

An initial coding process was done of adults according to their age. As shown in Figure 12, most of the research deals with adults as a whole. This category includes 174 of 217 studies, or 80% of the research; adults aged 16 to 25 account for 11% of this research; those aged 26 to 45, 5%; those from 46 to 65, 3%; and those over 65, 1%. However, it should be noted that whenever a study dealt with several age groups, it was categorized as generic; hence the need to qualify the data. A more in-depth analysis would provide a more accurate picture of the situation. Nevertheless, the data indicate a decline in the number of studies according to the age of the adults, and the lack of knowledge on seniors.

**Figure 12 – Adult Research Subjects by Age**
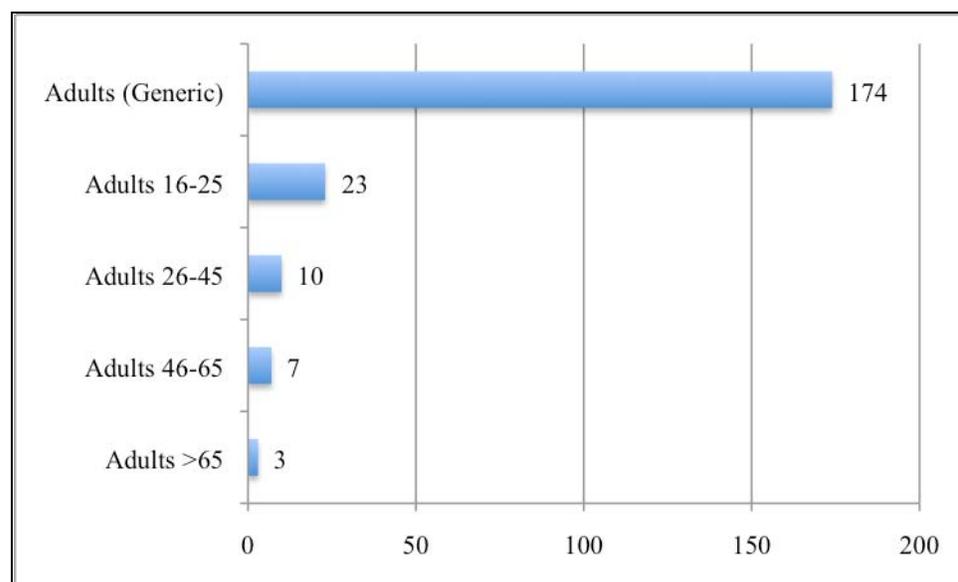


Again in order to better identify the characteristics of adults, the data underwent a second coding, using this time a view other than age. Some studies were therefore excluded from this analysis, as they did not yield any information on these aspects.

Figure 13 illustrates those characteristics, more specifically that of gender, education level and parental status. It shows that people with low levels of schooling have been the subject of numerous studies, whereas other categories (such as women) seem to have been neglected. Only Francophones were included in 53 of the studies, but the data had to be processed separately to achieve this number. Thus, Figure 13 has certain limitations. Here, too, additional analyses would be required to better appreciate the research on these adults' learning.

**Figure 13 – Characteristics of Adult Research Subjects**
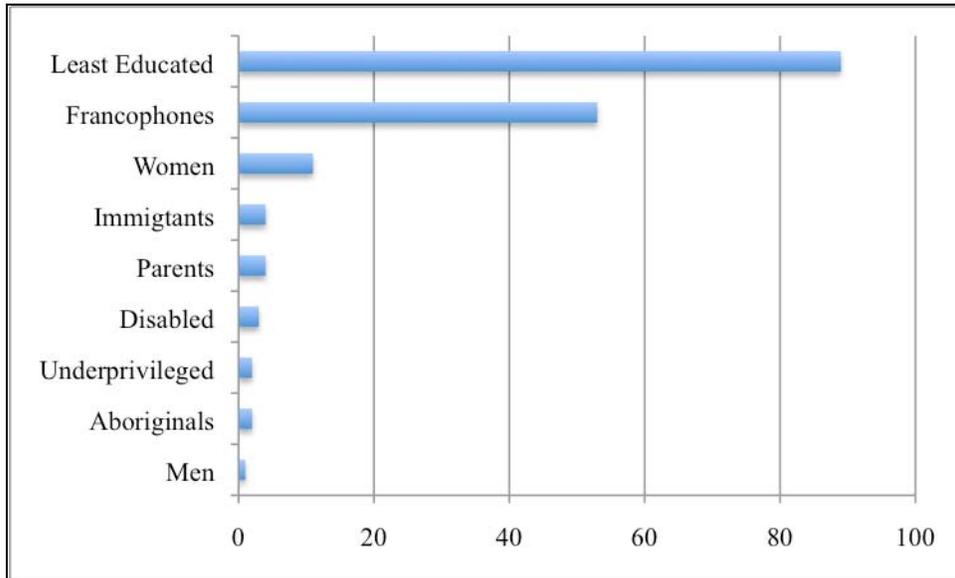


## 3.2.    Learning Types

This survey also attempted to identify the type of learning being dealt with in the various studies. This coding breakdown classifies learning into formal, non-formal and informal categories, as well as "All Three" or "Other". Figure 14 illustrates the breakdown of the 217 studies by learning style: the non-formal category is the largest, with 63 studies; followed by formal learning, with 55; and informal learning, with 17. The "All Three" category includes 27 studies, while the "other" contains 47 which actually mostly dealt with a combination of formal and non-formal. Overall, structured learning is the focus of the studies in this "other" category. A new data-processing method to classify research as a function of structured and unstructured learning would provide a somewhat different picture, but the available data confirm that the literature considers informal learning less important—a fact another processing method might merely confirm.

**Figure 13 – Learning Types**
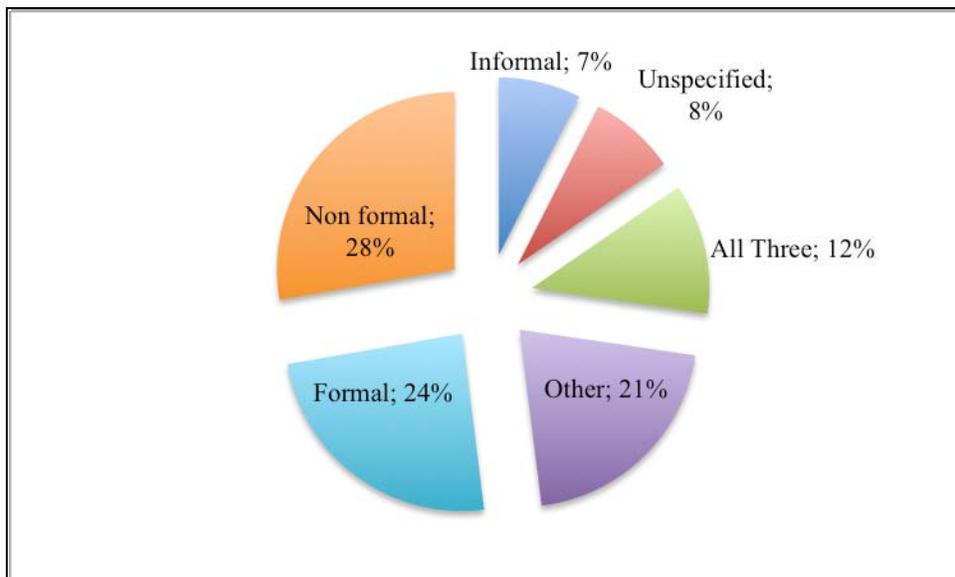
**To summarize this section,** it is found that the adults targeted in thie research on learning are most often individuals who fill generic social roles, with no mention of specific age that might change over time. On the other hand, when age is specifically targeted, young people are mostly the focus. However, age is given less focus when it is already known that more research on seniors is needed.

The data on research also reveal that studies focus on the least educated or the lowest literacy levels. Substantial information on these is therefore available and efforts must be made to examine different social groups. It is also important, in our opinion, to investigate further the situation of Francophones and to develop a specific summary of the work done in this area. It is more work to be accomplished according to available human and physical resources.

Finally, structured learning has received by far the most attention; hence unstructured learning should also be the focus of some research as it would provide new data enabling a better understanding of adult learners, their needs, interests and learning strategies.

# 4. Conclusion

This document takes stock of the research on adult learning conducted in French in Canada, published between 1997 through 2007, and now inventoried on the CDÉACF website. Having analyzed the RÉCRAF and RÉFA catalogue and collections, the NALD database, and Canadian theses and dissertations on the subject, this summary was developed based on 227 reference entries selected and classified using a previously developed analytical grid. Despite the limitations of this survey mentioned in the introduction, this method had the significant advantage of painting a bias-free picture of the situation—i.e., the number of studies in any given theme allows, on its own, an assessment of the field. Thus, the inductive approach, in itself, yields an overview of the state of affairs. Had the work been accomplished in accordance with pre-established categories (such as culture, prior learning recognition or learning by adults with the least education), there could no doubt have been a much more detailed evaluation of each. Additional efforts would have been made to identify the studies involved, which in turn, would have led to a summary with a lesser contrast, if any, when compared with the body of research on adult learning.

As such, this survey indicates that according to its rate of occurrence alone, *engineering* is the predominant theme. However, it should be noted that under that heading, evaluations—not training organization or planning or even meeting the demand—account for most of the literature (approximately 50% of studies). Furthermore, within the "Evaluation" sub-heading, programs are at the fore (60%), as opposed to learning assessment (7%), for which there seems to be no tools. The "Technology" and the "Structures and Policies" sub-headings line up seconds under the general heading of engineering. This points out to the importance of these two sub-headings far outweighing others on teaching and learning methods or on the use of other tools. There is evidence of considerably more studies being conducted on technology, and that they have been rising exponentially ever since technology was included into basic training (as was suggested by the proceedings of the 1990 Jomtien Conference), and that this research is being subsidized to the tune of several millions of dollars.

At the other end of the spectrum, the two least-explored headings are *content* and *prior learning recognition*. Given that they account for a meagre 2% and 3% of the 227 studies examined, there obviously is a lack of knowledge on these themes. It seems timely to gain a better understanding of the relationships between content and learning or training methods. A study on the links between learning content and the characteristics of adults (age and gender, for example) would, in our opinion, provide new knowledge on adult learning. While learning associated with reading and writing is well documented, very little is known about the strategies implemented to take ownership of knowledge and skills. For example, how is citizenship achieved? How can one develop teamwork abilities, so often advocated yet so difficult to pinpoint that no measures were introduced in the IALSS 2003, even though the analysis coordinated by Murray, Clermont and Binkley (2005) attempted to do so? And what is to be said about prior learning recognition? Although PLAR lies increasingly at the heart of adult education and training policies, the prevailing climate is so cool to the issue that only the basic principles (recognition of courses taken at another university or even another department at the same university, to take just one example) have still not been implemented. More needs to be known on this subject, knowledge on this issue must be unearthed and examined more thoroughly and systematically.

In actual fact, this survey makes room for similar comments on each theme developed. Taken as a whole, however (without re-examining those themes we have just dealt with), and using the critical 10% level (i.e., the equivalent of 22 studies) as the boundary between what was the most and the least examined, we can see that learning *difficulties, nature,* and *literacy* fall into the first group of themes, while *strategies*, *resources, participation and outcomes* fall into the

second. This breakdown is not entirely satisfactory, however, as the literature examined for the purposes of this document was all published between 1997 and 2007 inclusively. As a result, it forms part of a temporal framework that somewhat qualifies the need for additional research. Participation, for example, is a theme that was relatively well-covered in the past, but it is not so much the factors of participation that remain obscure, but rather the methods required to overcome barriers to participation. In this regard, specific reference is made here to individuals who, despite thinking they are least in need, are at the lowest end of the literacy scale, and more specifically, people in minority settings. To capture these individuals' interest, on the other hand, it would be necessary to determine if lifelong learning provides monetary and occupational gains, as the research in this regard is contradictory, even though gains were confirmed at the personal level. Individuals with higher levels of education obtain monetary or occupational benefits, but this holds true for men more than for women, and perhaps more for Anglophones than Francophones.

The question is then this: which gains, for which learning, over how much time? As mentioned by Myers and Brouckner (2006), the question is whether the type of qualifications achieved during adulthood has a positive impact on the lives of the adults concerned.

Following the same train of thought, it would also be useful to analyze the adult learning paths in order to better understand the decisions made and avenues followed to achieve learning and, doubtless, for re-training purposes in terms of fast and effective timelines. It would be relevant to develop a better understanding of adults involved in the learning process, and, for example, study the meaning they ascribe to their life experiences. In this regard, the context of lifestyle changes inherent to the arrival of new technologies, or again to those involved in developing basic skills can be considered.

With this concept of temporal framework, databases are being developed that encourage research on adult learning from a progressive standpoint. Knowing that skills are lost with age, but can be maintained if used, prospective research focussing on the sustainability of a dynamic, productive society despite the aging of the population could be valuable. It has often been said that young people are the adults of tomorrow while, at the same time, adults of today are increasingly having an impact on the future of young people. A way of experiencing the "learning together" that enhances the well-being of both age groups should undoubtedly be found.

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# Appendix 1 – Analytical Research Grid

| Learning | Client group | Learning Type |
|---|---|---|
| **Nature** and Fundamentals: Theories, models, principles, definitions, cognitive styles, success factors and motivation | **Adults – Generic** | **Formal:** diplomas/degrees and qualifications from educational institutions, the government, and parapublic and private institutions |
| **Content** and objects: Related to professional and personal development, social issues, family challenges, social involvement, culture, etc. | **Adults 16-25** [who, characteristics (M or F), specifics, attitudes, motivation, goals, perseverance, etc.] | **Non-Formal:** educational in nature, but involving no degree/ diploma. Institutions whose main activity is not teaching |
| **Resources** used: documentary sources, funding, instructors, ICT, networks, groups, etc. | **Adults 26-45** [who, characteristics (M or F), specifics, attitudes, motivation, goals, perseverance, etc.] | **Informal:** any activity carried out in a non-instructional environment (independent study, incidental learning, etc.) |
| **Strategies:** methods, intellectual methodology (note-taking, documentary research, memorization), analysis and critical examination. Objectives, procedure | **Adults 46-65** [who, characteristics (M/F), specifics, attitudes, motivation, goals, perseverance, etc.] | **All Three** |
| **Learning Difficulties:** Barriers, dropping-out, language, specific problems, etc.) | **Adults > 65** [who, characteristics (M or F), specifics, attitudes, motivation, goals, perseverance, etc.] | **Unspecified** |
| Educational **Engineering**: (Expression of demand, needs analysis, timing, duration, etc.) learning and program evaluation methods | **Sexes:** Women – Men | **Other** |
| **PLAR Prior learning recognition** and skills transfers: Specialized centres, formulation of the need for equivalencies, conversion of position titles, etc. | Family – **Parents** | |
| **Learning Outcomes** and Scope: Personal development, employment benefits, exercise of social roles, creation of new networks, social contributions | **Aboriginals** | |
| **Participation** | **Disabled** | |
| **Other** | **Immigrants** | |
| | **Least educated** | |
| | **Other** | |