

STATE OF THE FIELD REPORT

BARRIERS TO PARTICIPATION IN ADULT LEARNING

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Executive Summary

For most adults, participation in learning activities is a matter of choice that must be fitted into work, family and community responsibilities, and other interests and obligations. Participants in formal educational activities are more likely to be those with higher educational attainment and those between 18 and 50 years. Non-participants are more likely to be members of racial or ethnic minorities, persons over 50 years, and persons with low literacy skills, low income, and physical, sensory or learning disabilities. The Adult Education and Training Survey indicates that only 37% of adult Canadians participate in formal learning activities while the New Approach to Lifelong Learning Survey indicates that 96% participate in intentional and incidental informal learning activities.

The concept of "barriers" to participation in learning opportunities has been important in the adult education literature over the past 50 years. Barriers are classified as situational, institutional, dispositional or attitudinal, and academic.

Situational barriers consist of broad circumstantial conditions that hamper the ability of adult learners to gain access to and pursue learning opportunities. The situational barriers most frequently discussed in the literature include: multiple conflicting responsibilities for home, family, children and work; financial problems; lack of adequate and affordable childcare services; job commitments; transportation problems; having a mobility, sensory or learning disability; and lack of support from others.

Institutional barriers consist of limitations inherent in the methods institutions use to design, deliver and administer learning activities. These methods are frequently biased against or ignorant of the needs of adult learners. The institutional barriers most frequently discussed in the literature include: the complexities of providing financial support to learners to pay for tuition fees and the resources needed for learning activities; negative attitudes toward adult learners; a general lack of support services at times and places suitable to adult learners; and recognition of prior learning and previously obtained academic credentials.

Dispositional or attitudinal barriers relate to learners' perceptions of their ability to seek out, register in, attend and successfully complete learning activities. The attitudinal barriers most frequently discussed in the literature include: low self-esteem; negative attitudes about being an adult learner—too old, too busy, too tired, too sick, not smart enough, not rich enough, don't have enough time; don't need any more education; don't have adequate language skills; and not interested.

Academic barriers relate to the skills that are essential to successful learning. The academic skills most frequently discussed in the literature include: literacy, numeracy, and computer-related skills; ability to access and understand information; critical and reflective thinking skills; and skills in writing essays, examinations and tests. Academic skills that are not mastered in childhood and adolescence remain problems for adult learners; and skills that are learned early can decline through lack of use.

The literature review also identified two additional groups of barriers: pedagogical and employment training. Pedagogical barriers are largely based on lack of understanding on the part of instructors, facilitators and administrators about: how adults learn; the benefits of learner-centred teaching and active learning; diversity among adult learners in terms of learning style and preferred types of

learning activities and information; and adult learners' needs for relevancy in content, recognition of prior learning, respect from others, and a responsive lifelong learning system.

Employment training barriers are located within workplaces rather than educational institutions. Participants in employer-sponsored and workplace training are more likely to be well-educated persons in high wage jobs. Women receive less training than men; immigrant men receive less training than their Canadian counterparts. The provision of training for low-wage workers and workers with low literacy skills is viewed as not contributing much to the economic welfare of the employer.

The literature review also identified the elements of a responsive lifelong learning system. Such a system would: recognize the needs of adult learners and their prior learning; be supportive, flexible, accessible, available, relevant, respectful, learner-centred, coordinated and integrated; and would emphasize cooperative and collaborative learning rather than competitive learning.

Major gaps in the literature were identified as including gaps in knowledge about:

- Perceived and actual barriers experienced by non-participants in relation to learning opportunities.
- The differences between formal and informal learning, and between intentional and incidental informal learning.
- The potential role of formal educational institutions in supporting and recognizing informal learning activities.
- The interaction among various types of barriers.
- Barriers associated with informal learning.
- The economic benefits of informal learning.
- Changes in barriers over transition periods.
- The role of personal identity as a learner.
- Alternative methods for assisting adult learners to fund their formal and informal learning activities.
- The application of existing research-based knowledge.

1.0 Background to the Report

This report focuses on barriers to participation in adult learning activities. The concept of "barriers" has been an important concept addressed in the adult education literature over the past 50 years. Barriers and access to participation in adult learning activities are most often classified using concepts developed by Patricia Cross and reported in her book, *Adults as learners: Increasing participation and facilitating learning* (1981). But prior to that date, such authors as Cy Houle (1961), Malcolm Knowles (1970) and Roby Kidd (1960, 1973), wrote about the problems encountered by adults in attempting to access appropriate learning opportunities.

In addition to the literature on barriers, the research team looked at two related types of reports and studies that examined: (1) the elements of a responsive educational system to support and encourage participation in lifelong learning, and (2) best practices in teaching. These two types of reports were included based on the assumption that both contributed to reducing barriers and increasing participation – one through good institutional policies and practices and the other through good pedagogical practices.

The remainder of Section 1 provides a general discussion of barriers and related concepts. Section 2 describes the methods used to complete the literature review. Section 3 looks at specific aspects of participation and barriers as reported in the literature. Section 4 identifies some knowledge gaps and possible areas of future research.

1.1 Barriers

Cross (1981) classified the factors that create barriers to adult learning activities as: situational, institutional and dispositional. These factors operate both prior to and throughout the learning activities. Potter and Alderman (1992) added academic factors as a fourth set influencing participation mainly during learning activities.

- Situational factors – also referred to as life factors (Fagan, 1991) – consist of broad circumstantial conditions that hamper the ability of adult learners to gain access to and pursue educational opportunities. These factors include, but are not limited to:
 - The multiple and often conflicting roles and responsibilities of most adults in relation to their work, family, and community.
 - The amount of discretionary resources – time, energy and finances – the adult learner can or is willing to expend in pursuing learning activities.
 - The level of support the adult learner receives from significant others in his or her life.
 - The distance the adult learner must travel to reach the learning opportunity.
- Institutional factors – also referred to as program (Fagan, 1991) or structural factors – consist of limitations inherent in the methods institutions use to design, deliver and administer learning activities, methods that are frequently "biased against or ignorant of the needs of adult learners" (Potter & Ferguson, 2003, p.8). These factors include, but are not limited to:
 - The availability and quality of information about learning opportunities.
 - The level and type of credentials required for admission to learning opportunities.
 - The quality and complexity of admission and registration procedures.
 - The timing, scheduling and sequencing of learning opportunities.

- The attitudes and behaviours of administrative staff and instructors toward adult learners.
 - The quality and availability of essential support services for learners including library and computer resources, advising and counselling services, parking and transportation services.
 - The availability of administrative services at times suitable for the adult learner.
- Dispositional factors – also referred to as learner-inherent (Fagan, 1991) or attitudinal factors – relate to learners' perceptions of their ability to seek out, register in, attend and successfully complete learning activities. These factors include, but are not limited to:
 - Self-confidence
 - Attitudes about the benefits of learning
 - Attitudes about self that may adversely affect learning.
 - Prior negative experiences in learning activities.
 - Perceptions learners hold about the attitudes of administrators and instructors.
 - Feelings of being isolated within a learning community.
 - Health and fitness conditions that adversely affect ability to learn.
- Academic factors include skills essential to successful learning. The importance of these factors is based on whether the skills were ever learned; and if learned, the learner's current skill level in light of the elapsed time since last used. These skills include, but are not limited to:
 - Literacy skills in reading, writing, listening and speaking
 - Numeracy skills.
 - Computer skills.
 - Skills in accessing information.
 - Attention and memory skills.
 - Critical and reflective thinking skills.
 - Skills in writing essays, examinations and tests.

In the literature, some factors, such as childcare, financial support and transportation services, are classified as both situational and institutional barriers depending on the source of the problem. For example, financial support is situational when the adult learner does not have access to sufficient funds to pay for all aspects of the learning activities; and institutional when admission and registration fees are high, learners are required to pay for additional resources (e.g., computers), institutions provide no flexible means to pay for learning activities, or governments have inflexible mechanisms to provide financial support to adult learners in need. Finances can also become an attitudinal barrier when the individual learner must balance out the cost of attending learning activities against the anticipated benefits. For some learners, the benefits of participating may never be high enough to outweigh the costs.

1.2 Elements of a responsive educational system

In a 2003 publication, Judith Potter and Chris Ferguson used these four sets of barrier-related factors to identify five elements essential to the provision of a lifelong learning culture within an institution: recognition, support, flexibility, accessibility and availability. To these elements we would add relevancy and respect based on the work of Roby Kidd (1960, 1973). These seven elements are not mutually exclusive and have considerable impact on each other.

- Recognition addresses the fact that adult learners, whether part-time or full-time, need to have access to suitable learning opportunities at various times throughout their lives. Recognition of this fact may require a fundamental shift in the policies and practices of educational institutions, a shift that would result in understanding, accepting, encouraging and facilitating lifelong learning. For example, disadvantaged adult learners should not have to justify to funding agencies why they need to attend learning activities on a part-time basis. The message conveyed with such policies and practices is that part-time learning is second-rate and that the "proper way to get an education is to move directly from high school to post-secondary education as a young person studying full-time" (Potter & Ferguson, 2003, p.9).

Recognition must also extend to taking into account a learner's existing credentials and prior learning. The lack of recognition of the credentials of immigrants and refugees is particularly problematic. Many adults become discouraged before they begin pursuing their learning needs because of their expectation that their previous learning will be ignored and they will have to start over again if they wish to obtain a credential at a new and higher educational level or in a new country.

While prior learning is increasingly being recognized by educational institutions, the only province reported in the literature as currently having a system-wide strategy for assessing and recognizing prior learning is Nova Scotia (OECD, 2002). The transfer of credits from one institution to another or from one level of the education system to another is also problematic. Improved linkages need to be created between and among public and private secondary and post-secondary institutions, and between educational institutions and business, industry and community agencies that provide learning opportunities.

- Support addresses the needs of adult learners in areas related to academic skills, financial support, career development, and family and work responsibilities. All adults go through periods of transitions in their lives during which they may need additional support in all these areas. Those adults who are relatively well-educated appear to have little trouble accessing more educational opportunities and the support services necessary to succeed; but the challenges facing under-prepared and under-educated adults are formidable. Educational institutions need to be able to provide all adult learners with guidance throughout their search for and participation in suitable learning activities.
- Flexibility addresses, not a need to reduce educational standards, but a need to understand that "the realities of adult learners' lives often differ dramatically from [those of] 'traditional' students" (Potter & Ferguson, 2003, p.14). Adult learners need access to a variety of different teaching and learning formats; flexible times and locations for learning activities (e.g., distance education, online learning, daylong workshops, evening and weekend sessions); modified residency requirements, and credit for prior learning and for credits obtained at other institutions. Employers can encourage adult learning by allowing flexible work schedules or making learning activities part of the workday.
- Accessibility and availability address the need of adult learners to be able to access learning activities at times, locations, and formats suitable to their multiple family, work and community roles and responsibilities. These learning activities need to be available when the learner needs them rather than when educational institutions are willing to offer them. Flexible online learning

activities with multiple access points and continuous intake would go a long way to making the elements of accessibility and availability functional.

- **Relevancy** addresses the need for adult learners to have access to learning opportunities with content that is relevant to their family, work and community responsibilities. At the very least, courses need to be applicable to their current responsibilities and consistent with their career aspirations and future professional and personal development.
- **Respect** addresses the need for adult learners to be treated by all staff members of educational institutions – instructors, administrators, and service providers – with thoughtful consideration. Too many adult learners encounter negative attitudes of staff members toward part-time, adult learners, particularly those who are not familiar with postsecondary educational institutions.

1.3 Best practices in teaching

The research team reviewed some reports and studies that address best practices in teaching (Angelo, 1993; Gardiner, 1994; McKeachie, 1994; Polson, 1993; Stage, Muller, Kinzie, & Simmons, 1998). While not directly related to barriers and access, these reports apply existing research to the improvement of learning opportunities. Like the elements of a lifelong learning system identified by Potter and Ferguson (2003), these reports on best practices imply essential principles for extending and supporting lifelong learning in formal classrooms.

The best summary of these practices is provided by Thomas Angelo (1993):

- Active learning is more effective than passive learning.
- Learning requires focussed attention and an awareness of the importance of what is to be learned
- Learning is more effective and efficient when learners have explicit, reasonable, positive goals, and when their goals fit well with the instructor's goals.
- To be remembered, new information must be meaningfully connected to prior knowledge; it must first be remembered in order to be learned.
- Unlearning what is already known is often more difficult than learning new information.
- Information organized in personally meaningful ways is more likely to be retained, learned, and used.
- To learn well, learners need feedback on their learning, early and often; to become independent, they need to learn how to give themselves feedback.
- The ways in which learners are assessed and evaluated powerfully affect the ways they study and learn.
- Mastering a skill or body of knowledge takes great amounts of time and effort.
- Learning to transfer, to apply knowledge and skills in new contexts, requires a great deal of practice.
- High expectation encourages high achievement.
- To be most effective, instructors need to balance levels of intellectual challenge and instructional support.
- Motivation to learn is alterable; it can be positively or negatively affected by the task, the environment, the instructor, the learner.

- Interaction between instructors and learners is one of the most powerful factors in promoting learning; interaction among learners is another.

1.4 *Summary*

The research team used the concepts related to barriers to participation in learning activities, the elements of a responsive lifelong learning educational system, and best practices in teaching as starting points in our analysis of the literature reviewed for this report.

2.0 **Research Method**

The available material addressing barriers and access to educational participation is vast. Every venture into a new database provided the research team with up to 500 references. The research team therefore decided to be selective in the reports and articles included in this report.

2.1 *Criteria for including reports and articles*

The following criteria were used to determine whether a report or article would be included or not in this report:

- We limited our search to entries dated no earlier than 1991. This arbitrary date was selected based on the experience of the research team that going back prior to 1991 would not yield any data that would add to the information published after 1991. The 1991 date was also selected because barriers do change over time and 15 years was assumed to be a suitable period of time to identify such changes.
- While we attempted to limit the literature we reviewed to research studies, we found many useful reports that summarized research, considered the application of existing research, or described best practices for improving access to learning opportunities. If the report or article appeared to be research-based or to apply research-based concepts, it was included.
- Reports and articles were considered if the abstract indicated that "barriers" and "access" to learning opportunities were addressed.
- Reports and articles were included if the researchers, based on their prior experience and expertise in the field of adult education, concluded that the content was relevant to the focus of this report. In some documents, the terms "barriers" and "access" were included in the abstract but the report or article did not focus on participation in adult learning activities. This was especially true when accessibility was discussed in relation to health services
- Reports and articles were included if the authors were identified as Canadian or were known by the researchers to be Canadian or landed immigrants, if the data were gathered from Canadian participants, or the research was conducted at Canadian sites.
- Reports and articles were excluded if Canadian educational institutions or Canadian journals were involved, but the focus was not on Canadian participants, the data-gathering site was not Canadian, or the authors were neither Canadian nor landed immigrants.

- Reports and articles that did not meet the "Canadian" criteria were skimmed for the relevance of the content to this report. If the content was deemed to be relevant and informative, the report was included. Reports and articles from Tasmania, Ireland, the United Kingdom, the United States, Paris and Croatia have been included in the final list. Some international reports and articles sounded interesting and relevant but full-text copies could not be obtained.
- The research team decided to avoid, wherever possible, literature that would be reviewed by another research team associated with the Adult Learning Knowledge Centre. Therefore, we did not go in depth into the literature related to literacy, gender, cultural studies, distance education, and e-learning – although a few such reports have been included.
- We limited our perusal of the literature in the Health Education field. While some of these reports and articles might have been relevant to this report, a thorough search of the relevant databases was beyond the time available to the team. We understood Health Education to be the purview of the Health Education Knowledge Centre and assumed that the researchers attached to that Centre would address the issue of barriers and access to health-related learning opportunities
- The same decision was made about learning by First Nations learners and learning in the workplace.

We did include studies and reports on: older adults; adult learners with disabilities (physical, sensory and learning); and immigrants and refugees. Our review of reports and studies about barriers to learning opportunities for racial and ethnic groups is limited because we could not obtain access to several likely-sounding items.

2.2 *Databases searched*

We searched databases using the terms: "adult learning," "adult learners," "barriers" and "access." We attempted to use the term "Canadian" in our searches but found that many databases do not enter information on nationality.

We began by searching eleven databases (listed below). As we worked our way through these databases, we found others that looked promising; and time permitting, would have been searched. These additional databases are also listed below.

The following databases are listed alphabetically rather than in order of quality of entries or importance in the field of adult education. Details on each database are provided in Appendix A.

Academic Search Elite	www.ebscohost.com
AlphaPlus	alphaplus.ca
CASAE	www.oise.utoronto.ca/CASAE/maineng.html
CATALIST	dev.www.uregina.ca/catalist
CISTI	cisti-icist.nrc-cnrc.gc.ca
ERIC	www.eric.ed.gov
NALD	www.nald.ca
NALL	www.nall.ca
NIACE	www.niace.org.uk/
OECD	www.oecd.org/

ProQuest	www.proquest.com/markets/academic.shtml
ProQuest Digital Dissertations	www.proquest.com/umi/dissertations/

The additional databases that were not searched indepth include:

AERC	www.edst.educ.ubc.ca/aerc/
ALA	www.ala.asn.au/
CPRN	www.cprn.com
Encyclopedia of Canadian Adult Education	www.ucfv.bc.ca/adad/encyclopedia/
OTL	www.hrsdc.gc.ca/en/hip/lld/olt/01_index.shtml
UNESCO	portal.unesco.org/

2.3 *Method of analysis*

Our search of the databases yielded some 5,000 entries. These were then culled by using the criteria outlined above. The final list includes 90 entries. The reader will find annotated comments on each of these entries in Appendix B.

The entries included in this report were analysed to identify common themes. We began the analysis using the concepts outlined in the Background section to this report: factors affecting barriers and access; responsive elements of a lifelong learning system; and best practices in teaching. As the analysis progressed we identified themes not included in these concepts.

The next section of this report outlines the results of our analysis.

3.0 *Analysis of the Reports and Articles*

This section begins with a discussion about participation in learning opportunities as ground work for the subsequent discussions on barriers to participation and elements of a responsive educational system. Information on best teaching practices has been incorporated into pedagogical barriers and elements of a responsive lifelong learning system.

3.1 *Participation in Learning Opportunities*

For most adults, participation in learning activities is a matter of choice that must be fitted into work, family and community responsibilities, and other interests and obligations. The task of including all citizens into some aspects of a learning community is enormous, as is the task of narrowing the divide between the learning-rich and the learning-poor (Sargant & Aldridge, 2002). Most writers recognize this divide, but imply that reducing barriers to participation will successfully bridge it. At least one writer (Benn, 1997) views participation in education as a divisive agent.

The barriers to participation in learning activities that are routinely reported in the literature describe problems that participants and potential participants encounter when trying to gain access to and complete these activities. The barriers that confront non-participants are of a different magnitude and quality (Gorard & Selwyn, 2005), although such persons tend to describe their reasons for not participating in the same terms as those used by participants (Hart, Long, Breslauer & Slosser, 2002).

Participants in formal educational activities are more likely to be those with higher educational attainment (Benn, 1997; OECD, 2002) – the likelihood of participating increases with level attained

(Hart et al., 2002); and those between 18 and 50 years of age (OECD, 2002). Individuals from professional/managerial families are three times more likely to obtain post-secondary degrees than those from working class origins (Livingstone & Stowe, 2001). Non-participants are more likely to be members of racial or ethnic minorities, those with low literacy and foundation skills (Hart et al., 2002; Statistics Canada/OECD, 2005), those with low incomes (ABC Canada, 2002; OECD, 2002), those over 50 years (Carlton & Soulsby, 1999), and those with physical, sensory or learning disabilities (Reynolds, 2002).

Gorard and Selwyn (2005) suggest that patterns of participation in formal education are set early in life through such key variables as age, ethnicity, gender, initial schooling, and the literacy culture of the family (OECD, 2002). They go on to suggest that learners who, early in life, create a learner identity for themselves inimical to further study are unlikely to participate in formal educational activities beyond compulsory schooling. The nature of an individual's learner identity may explain more about non-participation than the various barriers that are routinely describe in the literature. The OECD background report on the state of adult learning in Canada (OECD, 2003) indicates that 63% of adults do not participate in formal learning activities; and of these persons, only about 20% have plans for future participation (Hart et al., 2002).

The literature, taken as a whole, focuses on non-participation as a problem that can somehow be corrected if we could just eliminate barriers or design educational programs that would entice and encourage participation or if individual non-participants would only become more motivated. Stalker (1997) argues that situational and dispositional barriers to participation are both perceived in Cross' model as the fault of the learner.

These two barriers implicitly assume that potential learners are responsible for their own non-participation and that the non-participant is somehow inferior to the participant, with less desire or motivation to overcome barriers. The third problem with this classic model lies in its tendency to give little consideration to the impact of macro-level factors. Cross does not make clear connections to the macro-level social, economic, political and cultural contexts which form barriers to participation.... [These contexts] are experienced on a day-to-day basis in ways which foster or inhibit participation in adult education (Stalker, 1997, p.1).

In terms of women's participation in adult education, important macro-level barriers are described by Stalker as including patriarchy, androcentricity, sexism or sex discrimination, and hostility toward women or misogyny. Her analysis of the barriers to participation experienced by women suggests that adult educators should turn their attention to doing a critical analysis of the barriers experienced not only by women, but also by other non-participating and learning-poor groups.

Successive governments have tied participation in adult education and training to economic policy, and non-participants may be required to participate if they seek government financial support. In assessing the adequacy of education and training, Baran, Berube, Roy and Salmon, (2000) argue that increasing knowledge about barriers must be viewed as a complementary strategy to estimating the rate of return on investments in education and training; and that such knowledge is essential in the design of policy actions toward the pursuit of equity goals.

While reports of the Adult Education and Training (AET) Survey (Baran et al., 2000) indicate that only 37% of adult Canadians participate in formal education and training, reports from the New Approaches to Lifelong Learning (NALL) survey indicate that 96% of adult Canadians participate in

informal learning activities (Livingstone, 2002). The NALL survey also found that participation in informal learning does not fall off after age 50 (Fisher, 2005) and that those without a high school diploma spend as much time in learning activities as those with a university degree (OECD, 2002).

The Adult Literacy and Life Skills (ALL) Survey (Statistics Canada/OECD, 2005) combines the research methods used in the AET survey with those used in the NALL survey and the International Adult Literacy Survey to measure participation in both formal and informal learning and basic literacy skills. The ALL study found that engagement in passive forms of informal learning or learning that is incidental to other life activities is an almost universal activity, while engagement in active forms or intentional informal learning activities are more unequally distributed within the general population. Active engagement in informal learning is strongly related to education attainment and skill levels.

Carlton and Soulsby (1999) argue that, for groups with the lowest participation rates, learning activities, whether formal or informal, are generally designed and delivered by not-for-profit and community agencies rather than formal educational institutions. Individuals who succeed in such programs may have trouble making the transition to a formal educational institution because credentials and prior learning are not recognized and because access to a formal institutional is so complex and impersonal.

Low literacy levels are linked to low participation rates and to above-average personal and learning difficulties, low self-esteem, associated social problems and below-normal incomes (HRDC, 2001). Literacy problems are viewed as costing businesses and industries in terms of lost productivity, and health and safety problems.

The IALS reported that 80% of persons 65 years and over are at the two lowest literacy levels (McCardle, 2002). However, these seniors perceive themselves as well able to cope with day-to-day living and as having no literacy problems. For such individuals, literacy was considered a luxury in their youth and opportunities to gain literacy skills as adults were limited. In their current personal and work lives, a high level of literacy is not viewed as essential. Many individuals function adequately at a literacy level congruent with their community's development and expectations (McCardle, 2002; Millar & Falk, 2000).

The best educated and most skilled workers tend to participate more in job-related training than workers who have low levels of educational attainment and who hold low-waged, low-skilled jobs (Lowe, 2001). Part-time workers participate less than full-time workers (OECD, 2002). Participation in employer-sponsored educational activities decreases sharply after age 44 (OECD, 2002). Women do not receive the same level of employer-sponsored learning opportunities as men (OECD, 2002). Workplace training provided by employers increases with the size of the company (OECD, 2002; Statistics Canada/OECD, 2005). Training low wage workers is viewed by employers as problematic because the turn-over rate among such workers is high, the structure of low-wage jobs does not lend itself to further training, and there is a lack of evidence of the effectiveness of such training (Ahlstrand, Bassi & McMurrer, 2003). When low wage workers gain literacy skills and develop new work-related skills, they often demand better pay and better jobs. If these rewards are not forthcoming from their employer, they may seek a better job. Future access to workplace training is a concern for four groups of workers – self-employed workers, home-based workers, part-time workers, and temporary or contract workers (Lowe, 2001).

Livingstone (2002), reporting on the NALL Survey, indicates that informal learning is extensive throughout the general population and that adults tend to engage in informal learning in areas related to major life responsibilities:

- Those in the labour force or expecting to be in soon, engage in learning projects to keep up in areas related to general job or career knowledge, new job tasks, problem-solving, communication skills, occupational health and safety, and employment-related uses of computers and other technologies.
- Those in community volunteer work engage in learning projects about interpersonal, communication, organizational or managerial skills, leadership skills, and social issues.
- Those involved in household work engage in learning projects about home maintenance and renovations, gardening, cooking, and good nutrition.

In addition, adults engage in informal learning related to general interests such as health, fitness and well-being, environmental issues, finances, hobby and leisure interests, public issues, the use of computers, and sports and recreation.

What is missing from the literature on participation is a cost benefit analysis for individual learners, for organizations that sponsor work-related education and training, and for society in general. Another missing component is an investigation of the barriers an adult might encounter in carrying on informal learning activities.

3.2 *Barriers to participation*

The recent literature on barriers to participation in learning opportunities is interesting in that so little of it addresses the concerns of men as a distinct group. Barriers are studied for women and for marginalized groups in society: the unemployed poor, the working poor, those with poor literacy skills, immigrants and refugees, persons without good English or French language skills, older adults, persons with sensory (hearing and vision), mobility and learning disabilities. In studies about these marginalized groups, data are rarely reported for men and women as separate groups. The reader is left with the assumption that immigrant men and immigrant women, for example experience the same barriers although this seems unlikely. Stalker (1997) suggests that the concepts described in Cross' model are not gender neutral, particularly those related to situational and attitudinal barriers. The absence of men from the literature on barriers is not immediately noticeable – our awareness of an absence is never as acute as our awareness of a presence – but is one that needs to be explored further through critical inquiry.

Fagan (1991) argues that it is not enough to understand barriers to participation separately and independently. A more complete understanding of participation and non-participation must be based on an examination of the interactions among the various types of barriers. This type of analysis is missing from the literature as is any discussion of the relevancy of each barrier to the tasks of the successive tasks of seeking out information on available learning opportunities, gaining admission to and registering in a learning activity, and participating in that learning activity through to a successful conclusion. Schlossberg (1984) identifies these transitions as moving in, moving through, and moving on; and considers how individuals might require different resources in each.

Concerns about childcare, for example, would change as the individual moves through successive transitions. In the moving in stage, the parent needs to find and register the child in a suitable and affordable childcare service and then find the funds to pay for it. Next both child and parent need to

go through a transition period in which both become adjusted to the new situation. Then, while the parent is moving through the learning activity, he or she may need to find alternative childcare services to deal with a sick child. And throughout the process the parent/learner must keep up with studies and attendance in the midst of potential chaos in the family.

Two brief anecdotes help explain why more study is needed on the interaction of various factors that create barriers to participation:

- One young woman of our acquaintance, a single mother on social assistance, was accepted into a university program to begin in January. The social assistance worker told her that she must complete the GED before she could be considered eligible for tuition assistance. She could not write the GED until February. But she had to pay her fees in January or risk being de-registered from all her courses and no longer have access to the library and computer resources essential to her learning program.
- Another young mother on social assistance found she had to stay home with a sick child. In order to attend the audioconferenced class, the educational institution arranged for her to call in from home but charged her a \$25 fee to hook up to the conference bridge.

Barriers to participation in educational activities are similar for all groups of learners, with a few variations on the main themes for specific groups of learners.

3.2.1 Situational barriers

Situational barriers occur because of circumstances learners encounter in their current life situations. For example, role conflict and role strain are situational barriers that are frequently reported among women who are working, raising a family, and studying part- or full-time (Home, 2004; Home & Hinds, 2000). Role conflict and role strain can be viewed as major factors contributing to the learner's level of distress, a situational barrier that might keep potential participants from enrolling, or once enrolled, from successfully completing a learning program. Any set of circumstances that causes distress for the individual would contribute to situational barriers.

The situational barriers reported in the literature are:

- Multiple conflicting responsibilities for home, family, children, and work (ABC Canada, 2002; Archibald & Urion, 1995; Cumming, 1992; Dench & Regan, 2000; Hart et al., 2002; Home, 2004; Home & Hinds, 2002; Livingstone, 2002; McGivney, 1999; OECD, 2002).
- Financial problems (ABC Canada, 2002; Archibald & Urion, 1995; Cumming, 1992; Gaikhezheyongai, 2000; Hart et al., 2002; Livingstone, 2002; McGivney, 1999; OECD, 2002; Ostermeier, 2003; Potter & Ferguson, 2003).
- Lack of adequate, appropriate and affordable childcare services (Cumming, 1992; Gaikhezheyongai, 2000; McGivney, 1999; OECD, 2002).
- Scarcity of time (Dench & Regan, 2000; Lowe, 2001; OECD, 2002; Ostermeier, 2003).
- Job commitments (Cumming, 1992), conflict with paid employment (Hart et al., 2002).
- Transportation problems (Cumming, 1992), distance to be travelled to attend (Hart et al., 2002; Millar & Falk, 2000; Ostermeier, 2003; Reynolds, 2002).
- Being mobility disabled (Dench & Regan, 2000).
- Having a learning disability (ERIC Clearinghouse, 2000).

- Communication problems caused by poor hearing or vision (Dench & Regan, 2000; Grognet, 1997).
- Being in poor mental or physical health or having limited energy (Dench & Regan, 2000; Grognet, 1997).
- Lack of support from spouse, family members or employers (Furst-Bowe & Dillman, 2002).
- Lack of interest (Dench & Regan, 2000; Hart et al., 2002).

Many parents cite children as barriers to participation, but many also report being supported by children who frequently contribute to academic success by helping their parents search for information or learn how to use the Internet (Given, 2001).

While older adults cite disabilities and health problems as barriers to participation, those with such problems also report more positive benefits from learning activities than those who have no disability or health problems (Dench & Regan, 2000)

Situational barriers are understood as residing within the individual learner, as individual deficits that are the responsibility of the learner. However, inflexibility and lack of concerned support on the part of staff and instructors within educational institutions exacerbates the problems resulting from situational barriers.

3.2.1 Institutional barriers

Institutional or structural barriers reside within the organizations that provide learning opportunities. The literature reports on barriers in both educational institutions and workplaces in which education and training opportunities are provided. These barriers are created by policies and practices of educational providers as well as government policies at the federal and provincial levels.

Institutional barriers are identified as including:

- Lack of government financial support for both learners and providers (HRDC/CMEC, 1997).
- Costs of registering and purchasing learning materials (Potter & Ferguson, 2003).
- Inflexible and complex admissions procedures (OECD, 2002; Potter & Ferguson, 2003).
- Lack of transportation support services (e.g., reduced cost bus pass, convenient routes and schedules) and the resulting cost of getting to and from educational activities (Millar & Falk, 2000; Potter & Ferguson, 2003; Reynolds, 2002).
- Lack of adequate childcare services and financial support to pay for such services (McGivney, 1999; OECD, 2002).
- Negative attitudes toward adult learners, part-time learners, and learners from marginal groups (i.e., First Nations, immigrants, refugees, low income, hearing or vision impaired) on the part of administrative staff and instructors (Archibald & Urion, 1995; Given, 2001; Mullen, 1992; Reynolds, 2002).
- Lack of access to essential electronic equipment and necessary technical and infrastructure support (Furst-Bowe & Dillman, 2002; Gaikhezheyongai, 2000; Galusha, 1998).
- Inadequate academic advisement in selecting learning opportunities (Furst-Bowe & Dillman, 2002; McGivney, 1999).
- Inadequate student support services (Furst-Bowe & Dillman, 2002; Home & Hinds, 2000; McGivney, 1999).

- Lack of recognition of prior learning (McGivney, 1999), foreign credentials and credits gained from other educational institutions or community organizations (Potter & Ferguson, 2003).
- Lack of available courses at suitable and flexible hours (and every group perceives suitable hours quite differently) (Cumming, 1992; Livingstone, 2002; OECD, 2002).
- Lack of coordinated and useful information about educational opportunities (McGivney, 1999; Steinley, 1995).
- Poor location and inaccessibility of buildings and parking (Fitchen et al., 2002; Gaikezheyongai, 2000).
- Outreach strategies that do not make use of positive images of adult learners or fail to speak to individual strengths (ABC Canada, 2002).
- Gaps in programs across the educational system, particularly in relation to current literacy programming (Mullen, 1992); suitable programs not offered (OECD, 2002).

One institutional barrier that is regularly reported in literature is related to having suitable qualifications for gaining entry to formal educational programs. Many educational institutions now give tacit recognition of prior learning by reducing or eliminating entry requirements for mature learners. Other institutions give unassigned prior learning credits which do not reduce the need to complete compulsory courses but do reduce the total number of new credits required for a specific program (Potter & Ferguson, 2003). The learning portfolio process used in PLA and PLAR is evolving beyond its certification function to become an educative process in itself, one that enhances both individual learners and the communities in which they work and live (Myers, 2003).

The lack of appropriate credentials is often exacerbated by the lack of recognition by one educational institution of credentials obtained from another – particularly credentials obtained in a country other than Canada; and the lack of coordination between individual institutions, between different levels in the educational system, and between educational institutions and training providers in the workplace and the community. Several authors make a plea to institutions to coordinate their approaches to prior learning and the recognition of existing credentials (OECD, 2002; Potter & Ferguson, 2003).

Another institutional barrier that is regularly reported in the literature is the problem of paying for learning activities. This barrier is very complex because it involves not only the individual learner and the specific educational institution but also different government levels and departments. Some conditions that contribute to this barrier include:

- Total government funds for post-secondary education have declined steadily in real terms since 1980 (Lowe, 2001) while tuition fees have increased to take up the shortfall.
- Families and individuals must pay for an increasing share of learning costs at all levels (Lowe, 2001)
- Lack of public funding to support the learning activities of learners with low or middle incomes (Lowe, 2001); declining overall social support spending has resulted in government training funds being focused on the unemployed (HRDC/CMEC, 1997).
- The complex and restrictive procedures required to obtain financial support (Potter & Ferguson, 2003).
- Restrictive policies regarding who is entitled to financial support and how much they are entitled to (Potter & Ferguson, 2003).

- Charges for resources, in addition to regular tuition fees, that are needed to attend and complete educational activities. These resources include: textbooks, paper, access to computers and printers, lab fees, and so on; payment for educational costs in addition to regular living expenses (Potter & Ferguson, 2003).

The result of these problems is that many adult learners must work part- or full-time while also studying part- or full-time. Lack of coordination among the various groups responsible for providing funding and other support services is cited as a major barrier to accessing learning opportunities (OECD, 2002).

Group-specific institutional barriers include:

- Racism and negative stereotyping – a major concern for First Nations learners (Archibald & Urion, 1995).
- Lack of English or French second language programs – a major concern of immigrants and refugees needing to learn the language of the workplace, and of persons needing to become bilingual to obtain a suitable job (Cumming, 1992).
- Lack of suitable literacy and upgrading programs – a major concern for the under-educated (ABC Canada, 2002, Hart et al., 2002).
- Poor access to buildings and convenient parking or transportation services – a major concern for learners with mobility disabilities and for older learners (Carlton & Soulsby, 1999; Dench & Regan, 2000; Fisher, 2005).
- Lack of recognition of previously obtained academic credentials from another country – a major concern for immigrants and refugees (Potter & Ferguson, 2003).
- Lack of understanding of the difficulties that result from learning disabilities – a major concern for adult learners with learning disabilities (ERIC Clearinghouse, 2000; Fitchen et al., 2000; Kerka, 2002).

Sometimes structural barriers are hard to recognize because they are based on unquestioning adherence to "traditional" practices. One member of the research team spent several years trying to convince her institution to provide access to administrative services in the early evening and to keep the central telephone switchboard open during the lunch hour. These were traditional practices that had always worked in the past and therefore were viewed as still functional. She encountered other examples of structural barriers as a member of a graduate scholarship committee. Individuals who had earned part-time degrees were viewed as taking the easy way to a degree and their high grade point averages were viewed by other committee members as the result of taking too many "bird" courses. Some students were denied financial support based on these stereotypes. Another structural barrier is identified by Given (2001) in the design of Canada Census questionnaire. The term "school attendance," for example, refers only to the September to April academic year, while many adult students take courses between May and August. Such definitions privilege traditional students and lead to stereotypic thinking about the nature of adult learners.

The research team is of the opinion that an educational system should be designed so that it is easily accessible for even the most disadvantaged learners. Our experience is supported by the literature (Fitchen et al., 2000; Stalker, 1997). Designing educational institutions and learning opportunities to serve the adult learners who encounter the most barriers to participation – learners with low

incomes, low literacy skills, foreign credentials, and learning, sensory and mobility disabilities – creates a learning environment that equitably serves all learners

3.2.3 *Attitudinal barriers*

The literature continues to record barriers to participation based on attitudes and values of both the learners, their significant others, the community and far too many educational providers. Most attitudinal barriers are viewed as the result of some inadequacy on the part of the learner.

Attitudinal or dispositional barriers to participation include:

- Low self-esteem (Cumming, 1992; Gaikezhayongai, 2000; Mullen, 1992), lack of confidence (Millar & Falk, 2000).
- General nervousness about ability to succeed (Hart et al., 2002), feeling like a fraud (McIntosh, 2000; Robbins, 2004).
- Lack of personal or career development goals (Kerka, 2002).
- Feelings of being stigmatised as "non-traditional" by administrators, instructors or traditional students (Mullen, 1992).
- Feelings of being isolated in the learning environment (Galusha, 1998).
- Past negative experiences as a student (Cumming, 1992).
- Negative image of self-as-learner resulting in feeling that learning is a burden rather than an investment (Gorard & Selwyn, 2005).
- Myths about negative relationships between aging and learning – and the age at which this myth begins is usually the age at which the adult stops being a full-time participant in education (at 18, 21 or 24 years) or an active participant in the paid labour force (at 55, 60 or 65 years) (Dench & Regan, 2002).
- Negative attitudes keep many adults from participating in learning activities. Many of these attitudes are based on stereotypical myths and include:
 - Attitudes of the learners toward themselves: the "too" myths – I'm too old, too busy, too tired; too sick; and the "not" myths –not smart enough, not rich enough, don't have enough time, don't need any more education (I've done enough already), don't have adequate language skills (OECD, 2002).
 - The "not interested" myth is difficult for staff and instructors in educational institutions to address, although one article made an excellent case for all educators learning to market their programs more effectively (Dench & Regan, 2000; Hansen, 1998; Hart et al., 2002; Mullen, 1992).
 - Attitudes of others toward adult learners: "you're too old to be back in school," "if you didn't make the grade as an adolescent, you'll never make it as an adult," "it's a waste of resources to help adults gain access to educational opportunities for adults", "anyone with a disability must not be a very good learner" (ERIC Clearinghouse, 2000; Mullen, 1992).

Attitudinal barriers are problematic because they are hard to document; but their negative impact of an individual can be devastating. While staff in educational institutions may not be able to change the attitudes of potential learners, like harassment and bullying, negative attitudes on the part of any educational provider should not be tolerated, must be identified and changed.

3.2.4 Academic barriers

Academic barriers occur because many potential adult learners, while having the necessary entry qualification, may have not used their academic skills for many years with the result that their skills may have declined (Lowe, 2001). For example, results from the International Adult Literacy Survey and the Adult Life and Life Skills Survey (Statistics Canada, 2005) indicate that the literacy level of many adults is well below the level predicted by their educational attainment.

Potter and Ferguson (2003) indicate that essential academic skills include:

- Literacy skills in reading, writing, listening and speaking
- Numeracy skills.
- Computer skills.
- Skills in accessing information.
- Attention and memory skills.
- Critical and reflective thinking skills.
- Skills in writing essays, examinations and tests.

While adult learners who have some academic skills can find learning opportunities to refresh these skills, those who have very poor literacy skills or who have difficulty communicating in the language of instruction may not be able to gain easy access to related programs. Since these adults often come from low income families, the number of courses and programs open to them is limited. The courses that are available are often offered through not-for-profit and community agencies and are poorly articulated with formal learning opportunities in educational institutions.

Academic skills are affected by an individual's state of physical and mental health. Cusack, Thompson and Rogers (2003) studied the impact of learning on health. They found that programs that encourage participants to learn academic skills such as goal setting, critical thinking, creativity, improving memory and speaking in public, also promote mental health. Like physical fitness, mental fitness has a positive impact of learning. Research studies conducted with older adults indicate that good physical health is positively correlated with social skills, self-esteem, memory, lifelong learning, and physical energy (Dench & Regan, 2000; Fraser, 2002).

The ERIC Clearinghouse summary on learning disabilities indicates that academic skills not mastered early in life remain difficult in adulthood. Childhood deficiencies in reading, language, memory, attention, visual perception and social-emotional adjustment tend to persist into adulthood (Gotteson, 1994). Learning disabilities do not disappear when an individual leaves school but create new problems in relation to work, self-esteem, social interactions and independent living (ERIC Clearinghouse, 2000).

3.2.5 Other barriers

Two additional sets of barriers were identified in the literature: pedagogical barriers related to teaching and facilitating educational activities and employment training barriers in the workplace.

3.2.5.1 Pedagogical barriers

A report by Cumming (1992) on access to literacy programs for language learners points out that pedagogical or teaching factors can act as barriers to learning and to continuing success within an educational program. Too many instructors in educational institutions have no understanding of the teaching strategies that best support adult learning.

Pedagogical barriers include:

- Not understanding how learners learn (Angelo, 1993); not understanding that the most effective teaching is learner- and learning-centred; not incorporating appropriate adult learning strategies into instruction (Grognet, 1997).
- Not taking into account diversity in information preferences, learning orientation factors, adult learning styles (Molinari, Blad & Martinex, 2005).
- Not taking into account learners' prior knowledge and experiences (Polson, 1993); lack of responsiveness to interests, backgrounds, and existing skills of learners (Cumming, 1992).
- Not providing enough time for adult learners to reflect on and integrate new knowledge and skills (Polson, 1993).
- Lack of recognition of prior learning (OECD, 2002; Potter & Ferguson, 2003).
- Not making the learning situation and materials relevant to learners' needs (Grognet, 1997; Polson, 1993); not focusing on the immediate application of new knowledge and skills in solving day-to-day problems (Polson, 1993).
- Administrators and instructors who hold over-inflated expectations about the benefits of learning (Butler, 2004)
- Administrators and instructors who attribute failure to learners' individual flaws rather than examining the quality of learning programs (Butler, 2003).
- Lack of understanding that learning is basically embedded in social relationships (Lowe, 2001); not providing sufficient opportunities for social interaction among learners (Dench & Regan, 2000); structuring online learning without providing opportunities and support for synchronous learner-to-learner interactions (Mercer, 2002); lack of face-to-face contact in distance and online courses (Galusha, 1998).
- Lack of communication and feedback between instructor and learners (Furst-Bowe & Dillman, 2002); lack of suitable strategies for providing feedback to students on their academic performance (Galusha, 1998).
- Lack of support for distance learning (Galusha, 1998); lack of technical support for using instructional technologies (Furst-Bowe & Dillman, 2002); lack of user-friendly technology-based services for learners (Jessome & Parks, 2001).
- Lack of concern and understanding for the culture of learners (Gaikezhayongai, 2000; Moquin, 2004); challenging or discounting learners' belief systems (Polson, 1993).
- Lack of instructor training in course development and the use of technologies in teaching (Galusha, 1998); lack of training in multisensory teaching methods (Winters, 1996).

The literature in higher education – a body of knowledge too rarely tapped by adult educators – is replete with suggestions for improving instructional strategies (e.g., Angelo, 1993; Gardiner, 1994; McKeachie, 1994; Stage et al., 1998) as is the literature in adult education (e.g., Davis, 1993). Jessome and Parks (2001), after conducting interviews with older learners, conclude that existing knowledge about how to design and deliver products, services and programs is not being used. The same concern could be said about other groups of adult learners. The literature on best practices in facilitating adult learning does exist – it is just not being taken into consideration in the design and delivery of many adult learning opportunities.

A further pedagogical barrier is reported by Feist (2001) who reports that instructors, like all adult learners, face barriers to learning to become better instructors. Like all adult learners, they need

support in their attempts to learn better teaching skills and their professional development programs need to apply sound principles of adult learning.

Lack of recognition of prior learning is cited as a major barrier to participating in adult learning opportunities. Prior learning and knowledge must be made visible and understandable if an educational institution is to recognize and credential it. The development of a learning portfolio is one strategy for doing this; and is viewed, not only as a means for helping individual learners build self-confidence and gain credit for prior learning, but also as a method to help communities build their learning capacity and the commitment levels crucial to successful community recovery, transition and development (Myers, 2003). An evaluation of the work of the Prior Learning Assessment (PLA) Centre in Nova Scotia reports strong evidence that the portfolio learning process generates major psychosocial benefits for learners in terms of significant improvement in self-confidence, self-awareness, and self-esteem, and that the learning and personal change generated by the process pay direct dividends in terms of improved employment, incomes and career prospects (Praxis Research & Consulting, 2002).

3.2.5.2 Employment training barriers

Workplace learning opportunities suffer from the same barriers as formal educational learning opportunities. Some additional barriers are reported in the literature on work-based training and professional development.

- The quality of workplace learning opportunities suffer when employers provide such training because it is a "good thing to do" or because external forces such as governments and clients need to be appeased (Ahlstrand et al., 2003).
- Employers need to understand the positive effect of training on business goals and needs (Ahlstrand et al., 2003) in addition to its positive effect on the satisfaction of workers.
- The nature of lower wage jobs does not easily lend itself to high quality training (Ahlstrand et al., 2003); employers may overlook the training needs of low wage workers if they believe that helping such workers acquire better skills or a better self-image may lead to worker dissatisfaction about wages and high turnover.
- From a worker's point of view, participating in training can result in lost wages (Hansen, 1998); from an employer's point of view, training opportunities can result in lost productivity; employers and workers need to understand both the costs and benefits of work-related training (Léonard, 2001).
- Adult immigrants receive fewer hours of work-related training than their Canadian counterparts (Simpson & Hum, 2003); women receive fewer hours of work-related training and employer-sponsored training than their male counterparts (Statistics Canada/OECD, 2005).

Because they are in daily contact with workers and have a holistic knowledge of individual workers' needs, labour unions are in an excellent position to provide worker education. However, Spence (1999) suggests that unions must develop for new partnerships with management, community organizations, and statutory bodies to meet the needs of workers' education more effectively.

Employer financing plays a central role in supporting learning opportunities. Levels of worker engagement in literacy and numeracy practices on the job are positively associated with the likelihood that workers will benefit from employer-sponsored education and training (Statistics Canada/OECD, 2005).

3.3 Elements of a responsive educational system

The elements of a responsive educational system are outlined by Potter and Ferguson (2003) and supported both directly and indirectly by other reports. Additional elements are proposed explicitly or implicitly by other authors. The main feature of a responsive educational system would be its central focus on the learner and the learner's needs and expectations rather than on making money or meeting the expectations of administrators.

A responsive educational system would:

- Recognize the needs of adult learners as different from those of traditional students (Potter & Ferguson, 2003), take into account prior learning and informal learning (Livingstone, 1999); facilitate the transfer of credits and credentials between educational institutions, between different levels within the system, and between educational institutions and other providers such as workplaces and community agencies (Potter & Ferguson, 2003).
- Be supportive of adult learners by helping them to ameliorate barriers to learning (Department of Education and Science, Ireland, 2000; Potter & Ferguson, 2003).
- Be flexible in providing a variety of different learning opportunities in a variety of different formats (Department of Education and Science, Ireland, 2000; Potter & Ferguson, 2003).
- Be accessible and available (Alberta Learning, 2002; Potter & Ferguson, 2003).
- Be relevant (Archibald & Urion, 1995; Hart et al., 2002).
- Be respectful of adult learners (Archibald & Urion, 1995; Gaikhezheyongai, 2000; Hansen, 1998; Johnson, 1995; UNECSO, 1997; Wood, 2001).
- Be learner-centred (Alberta Learning, 2002; Faris, 1995); involves learners in planning their own learning (Kenny & Cap, 2002).
- Be coordinated (Alberta Learning, 2002) and integrated (Department of Education and Science, Ireland, 2000).
- Focus on cooperation and collaboration rather than on competition (Bart, 2003) and conflict (Braswell, 2003).

Some provinces have made plans to create an educational system that will be responsive to adult learners. For example, Campus Alberta (Alberta Learning, 2002) is a global plan that will allow Albertans to pursue and achieve their lifelong learning goals. It is neither a program nor an institution, but rather a set of principles and a means through which the learning system can deliver "seamless" learning. The objectives of Campus Alberta are to eliminate barriers to learning and to foster lifelong participation in learning by increasing learners' ease of entry into and movement within the learning system, by creating more flexible learning opportunities, and by ensuring that learners have the tools they need to succeed in their learning.

The Department of Education and Science in Ireland has used lifelong learning as a governing principle since 2000. Two core principles are emphasized: a systematic, holistic approach to recognizing different levels of educational provision; and (2) equality of access, participation and outcome for adult learners with an emphasis on marginalised groups and those at risk of failure.

Finally, any responsive educational system would need to use best practices in the design of teaching and learning interactions. Angelo's "Teacher's Dozen" (1993), while developed for instructors in higher education, can be updated for use by instructor and facilitators in adult learning activities.

- Active learning is more effective than passive learning. Talking is more active than listening; writing is more active than reading; doing is more active than observing. Adult learners need opportunities for both active and passive formal learning, and intentional and incidental informal learning.
- Learning requires focussed attention and an awareness that what is to be learned is important and is relevant to the learner.
- Learning is more effective and efficient when learners have explicit, reasonable, positive goals, and when their goals fit well with the instructor's goals. Learners need opportunities to be involved in planning their own learning,
- To be remembered, new information must be meaningfully connected to prior knowledge; it must first be remembered in order to be learned. Acknowledging prior learning helps individual learners connect new knowledge to prior knowledge. Adults burdened by multiple roles and responsibilities may experience sufficient distress to temporarily create short-term memory difficulties.
- Unlearning what is already known is often more difficult than learning new information. Unacknowledged prior learning may be detrimental to current learning. Acknowledging prior learning may help adult learners understand the need for new information.
- Information organized in personally meaningful ways is more likely to be retained, learned, and used. Learner-centred and learning-centred approaches to teaching are more effective than content-centred or teacher-centred approaches.
- To learn well, learners need feedback on their learning, early and often; to become independent, they need to learn how to give themselves feedback. Adult learners may need support and assistance to become self-directed in their learning. Feedback strategies appropriate for adult learners need to be designed and used frequently throughout a learning activity.
- The ways in which learners are assessed and evaluated powerfully affect the ways they study and learn. Adults do not respond well to time-limited tests and examinations.
- Mastering a skill or body of knowledge takes great amounts of time and effort. Because of conflicting roles and responsibilities, adult learners sometimes do not have sufficient time or energy to master a skill or body of knowledge within time-limited learning opportunities.
- Learning to transfer, to apply knowledge and skills in new contexts, requires a great deal of practice. Workplace and "situated" learning (Brown, Collins & Duguid, 1989) opportunities are essential for adult learners.
- High expectation encourages high achievement, but expectations need to be realistic for adult learners and achievable within the conditions of their lives.
- To be most effective, instructors need to balance levels of intellectual challenge and instructional support.
- Motivation to learn is alterable; it can be positively or negatively affected by the task, the environment, the instructor, the learner, and the learner's prior experiences in the educational system.
- Interaction between instructors and learners is one of the most powerful factors in promoting learning; interaction among learners is another. Adults do better in learning activities that include opportunities for social interaction.

3.4 Summary

Barriers to participation in adult learning activities abound. Any review of the many existing barriers can leave the reader wondering why adults would ever bother to seek out learning opportunities. That they do is powerful testimony to their need to seek out and learn new knowledge and skills, and to their perseverance. Barriers can be found in the situations adult learners must confront in order to participate in learning activities; the ways in which educational institutions are organized and their policies and practices in serving adult learners; the attitudes learners bring to educational opportunities; the pedagogical practices used by instructors and facilitators of adult learning opportunities; and the ways in which employers provide workplace training opportunities.

4.0 Major gaps in knowledge

The knowledge gaps identified by the research team follow both directly and indirectly from the literature review. The research team also identified some gaps in the ways in which knowledge derived from existing research is being applied in adult learning and related activities. Some profitable lines of future inquiry have been identified for each gap.

4.1 Knowledge about perceived and actual barriers experienced by non-participants in relation to learning opportunities.

The ABC Canada study of persons with low literacy skills who do not participate in learning programs (ABC Canada, 2002; Hart et al., 2002) suggests that we do not have adequate knowledge about how non-participants experience barriers to learning. It seems likely that we have inadequate information about the non-participation of individuals from groups other than low literacy groups, such as: older adults; individuals with physical, sensory or learning disabilities; persons whose first language is neither English nor French; refugees and immigrants; persons in low wage jobs; and so on.

The survey methods typically used to identify barriers do not appear to be providing the quality of information needed to make decisions about how learning opportunities should be designed and delivered. While the ALL Survey (Statistics Canada/OECD, 2005) is a good beginning, the use of qualitative research methods, critical inquiry, and participatory inquiry would provide a quality of information that does not yet exist and that might help adult educators conceptualize barriers for different groups in terms other than those proposed by Cross (1981).

Potential lines of inquiry:

- A critical and participatory inquiry into how low literacy adults conceptualize barriers to their potential participation in adult learning opportunities.
- Similar studies with members of other low participatory groups.

4.2 Knowledge about the differences between formal and informal learning, and between intentional informal learning and incidental informal learning

Questions are raised in the literature about how we can distinguish between formal learning and informal learning, and between intentional informal learning and incidental informal learning (Livingstone, 1999; OECD, 2002). Livingstone (2002) provides an extensive discussion about the definition of informal learning. Learners and educational providers have different perceptions about what constitutes learning. Research on the differences among these three types of learning would

assist educators to develop clear definitions that could be used by all stakeholders involved in providing learning opportunities for adults.

This type of knowledge gap exists for many other terms: community-based learning, service-based learning, lifelong learning, the internationalization of educational activities, learning outcomes, learning competencies, learning communities. We need to develop a common understanding of all these terms.

Potential lines of inquiry:

- A study using the Delphi technique, to establish parameters that will allow us to distinguish between formal and informal learning, and between intentional and incidental informal learning.
- Similar studies in relation to other learning-related terms such as: community-based learning, service-learning, learning communities, and lifelong learning.
- Similar studies in relation to terms used to describe aspects of learning opportunities such as: learning outcomes and learning competencies.

4.3 Knowledge about the potential role of formal educational institutions in supporting and recognizing informal learning activities.

By definition, formal educational institutions have no role to play in providing informal learning activities; but they do have a role to play in supporting such activities and in recognizing the resulting knowledge and skills. The experience of the Prior Learning Assessment Centre of Nova Scotia would help educators in formal institutions understand how recognition for informal learning could be accomplished at a system-wide level.

Potential lines of inquiry:

- Preparation of case studies of the experience of the PLA Centre of NS and other centres to assist administrators in formal educational systems develop sound strategies for recognizing prior learning.

4.4 Knowledge about the interaction among various types of barriers

Fagan (1991), a literacy educator in St. John's, Newfoundland, suggests that choosing to participate or not in learning activities can be understood in terms of three sets of factors: learner-inherent factors (goals, capabilities); life factors (conditions and circumstances surrounding the individual such as information, transitions, barriers); and program factors or the nature of the educational programs available to the individual (organization, content, procedures, personnel). Fagan points out that it is not enough to understand these factors separately; learners, instructors and administrators must understand the factors in terms of their interactions with each other. The same point could be made about learners from a variety of marginal groups as they try to access learning opportunities.

Potential lines of inquiry:

- A series of ongoing studies to examine the interactions among various types of barriers for different groups of adult learners.

4.5 Knowledge about barriers associated with informal learning

While the research team did not find any research on barriers to informal learning activities, it seems reasonable to assume that some exist.

Potential lines of inquiry:

- Both quantitative surveys and qualitative interviews with adult learners to identify the types of barriers they experience when engaging in informal learning.
- A comparative study of the barriers associated with formal and informal learning activities.

4.6 Knowledge about the economic benefits of informal learning

This knowledge gap seems to be a logical companion to the gap about barriers to informal learning activities.

Potential lines of inquiry:

- A study of the economic costs and benefits of informal learning for the learner.
- A study of the economic costs and benefits of informal learning for society.

4.7 Knowledge about changes in barriers over transition periods

Barriers are rarely described in terms of how they change over time and in response to the transitions a learner must go through to enter and complete a learning activity. The concepts proposed by Schlossberg (1984) could be used as a starting point in such a study.

Potential lines of inquiry:

- A series of case studies of the barriers experienced by individual learners as they enter and proceed through a learning activity.

4.8 Knowledge about the role of personal identity as a learner

Positive self-esteem is an essential contributor to learner attitudes toward participation in learning opportunities in adulthood. More than 30 years ago, Howard McClusky (1970) proposed a component of self he described as "self-seen-as-learner". Gorard and Selwyn (2005) propose a similar concept and state that persons without a positive identity of self-as-learner are unlikely to participate in learning activities when they reach adulthood. We know very little about this component of self- concept, how it develops in childhood and adolescence, how it affects participation in adult learning opportunities, and how it can be modified in adulthood.

Potential lines of inquiry:

- A study of learners' conceptions of self-as-learner and how these concepts influence participation or non-participation in adult learning opportunities.
- A study of how learners' conceptions of self-as-learner develop in childhood and adolescence.

4.9 Knowledge about alternative methods for assisting adult learners to fund their formal and informal learning activities

Many adults must go into debt in order to complete the education or training they desire, even need; many adults cannot even afford to begin. We need to identify alternative methods for assisting adult learners to fund their learning activities.

For example, researchers examining the relationship between learning and healthy aging have found that older adults engaged in learning contribute more to their community and make better use of health-related resources than older non-learners (Dench & Regan, 2000). Another group of researchers have found that learning that encourages the use of academic skills helps older adults maintain mental health (Cusack, Thompson & Rogers, 2003). If learning, mental health, physical fitness and contributions to society are related, perhaps alternatives could be found to make tuition and other learning-related fees tax deductions.

Potential lines of inquiry:

- A study of the relationship between participation in learning programs and the use of health-related services for adults of all ages
- A feasibility study of the implications of granting income tax deductions for engagement in learning programs for adults of all ages.

4.10 Knowledge about the application of existing research-based knowledge

Finally, the research team identified two gaps that, while not knowledge gaps as such, indicate a fundamental underlying gap in how knowledge is used. These two gaps deal with: (1) the lack of application of existing knowledge in the design and delivery of learning opportunities for adult learners; and (2) the lack of integration among the different services that attend and support learning opportunities.

Jessome and Parks (2001), in writing about seniors' interactions with technology-based services, wonder why existing knowledge about the design and development of effective educational products, services, programs and environments for older adult learners are not being used by service and program providers. Experience and research provide knowledge about how best to design educational and information services for adults of all ages.

Angelo (1993), Davis (1993), Gardiner (1994), McKeachie (1994), Renner (1993) and Stage et al. (1998), among many others, write eloquently about how to improve all forms of instruction and learning through applying knowledge developed as a result of sound research. The work of these writers can be found in the literature related to higher education but very little of it has found its way into the adult education literature. Adult educators need to collaborate with writers and researchers in fields other than adult education to develop knowledge of value to adult learners. Lucrative fields that might be considered include: higher education, student development, adult development, student services, learning theory, cognitive style, learning style, constructivism, transformative learning, gerontology.

What is not clear is why educators are not able to make use of existing research-based knowledge about adult learning. Some possible problems include: existing knowledge is not readily available to educators; existing knowledge cannot be understood in application terms; existing knowledge is described in terms that are unfamiliar to practical educators.

Potential lines of inquiry:

- A series of user-friendly and readable publications that take existing knowledge and describe, in laypersons terms, how the knowledge can be applied in practical situations.
- A series of studies that document excellence in adult learning programs and activities and the principles and practices of effective adult learning that each program or activity represents.

The drive toward diversity that is featured prominently in the report of the Fifth International Conference on Adult Education results in a paradox. If we try to provide for diversity in all our educational programs, we may run the risk of trying to be all things to all people resulting in educators burn-out. Each educational provider has an obligation to itself to identify what it does best and to acknowledge that other providers may know more about different types of learners and different modes of delivery.

One of the elements described as being important in a responsive lifelong learning system is that it should present the learner with an integrated series of learning opportunities and a collaborative network of information and service providers that work cooperatively rather than competitively. Each community needs to work toward providing such a responsive learning system for its various citizens.

Potential lines of inquiry:

- The publication of a series of case studies describing how various communities have worked collaboratively to develop a responsive lifelong learning system.

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Appendix A: Databases Searched

Academic Search Elite

This database accumulates journal articles in non-electronic and electronic journals, as well as articles from other periodicals. The information is reported to the user in a tabular format that is very hard to cut and paste into electronic documents.

<http://www.ebscohost.com>

AlphaPlus

AlphaPlus provides information and resources for adult literacy. AlphaPlus addresses literacy issues for four groups of learners of specific interest to this report: Deaf, First Nations, Francophone and Anglophone. It also provides access to information about learning disabilities among adult learners. This database is a good alerting service but many of the connections to other websites are incorrect; some vital information is missing; and the abstracts are too short.

<http://alphaplus.ca/>

CASAE

The Canadian Association for the Study of Adult Education database provides links to a number of other websites but is somewhat disorganised and on some topics, is out-of-date.

<http://www.oise.utoronto.ca/CASAE/maineng.html>

CATALIST

The Canadian Network for Third Age Learning is a bilingual network of 50 organizations across Canada that fosters and promotes the learning of older adults through shared knowledge, expertise, research and resources. It also provides links to similar networks around the world.

<http://dev.www.uregina.ca/catalist/>

CISTI

The Canadian Institute for Scientific and Technical Information claims to be one of the world's major sources for information in all areas of science, technology, engineering and medicine. Unfortunately not enough of it relates to education.

<http://cisti-icist.nrc-cnrc.gc.ca/>

ERIC

The Educational Resources Information Center database is vast and reaches back into the 1960s. It cross-references articles in many relevant journals and provides full text for some education-related reports that may not be published elsewhere. ERIC also commissions special "Alerts" which summarize specific and timely topics.

<http://www.eric.ed.gov/>

NALD

The National Adult Literacy Database is a single-source, comprehensive, up-to-date and easily accessible database of adult literacy studies, reports, programs, resources, services and activities across Canada. It also provides links to similar services in North America and overseas.

<http://www.nald.ca/>

NALL

The New Approaches to Lifelong Learning database provides access to materials related to lifelong learning, learning in the workplace, and prior learning assessment and recognition (PLA/PLAR). <http://www.nall.ca>

NIACE

The National Institute for Adult Continuing Education (England & Wales) database provides access to a wide range of adult education and adult learning topics and links to other databases. <http://www.niace.org.uk/>

OECD

The Organisation for Economic Cooperation and Development database provides access to Canadian sections of international documents and comparisons between Canada and other OECD countries. <http://www.oecd.org/>

ProQuest

ProQuest Online is an information service that provides access to thousands of current periodicals and newspapers, many updated daily, and contains full-text articles since 1986. <http://www.proquest.com/markets/academic.shtml>

ProQuest Digital Dissertations provides access to UMI which publishes and archives over 1.6 million doctoral dissertations and masters theses, and sells copies on demand. <http://www.proquest.com/umi/dissertations/>

The additional databases that were not searched indepth include:

AERC

The Adult Education Research Conference database records all the papers presented at the annual Adult Education Research Conference. It is up-to-date and user-friendly but the majority of entries are non-Canadian. <http://www.edst.educ.ubc.ca/aerc/>

ALA

The Adult Learning Australia Inc. database provides access to a wide range of documents not otherwise available in North America. <http://www.ala.asn.au/>

CPRN

The mission of the Canadian Policy Research Networks is to create knowledge and lead public debate on social and economic issues important to the well-being of Canadians. Four networks have been established: family, health, public involvement, and work. While not directly related to adult education, many entries address educational and learning concerns within the focus of the networks. <http://www.cprn.com>

Encyclopedia of Canadian Adult Education

This database is maintained by the University College of the Fraser Valley. In addition to entries on Canadian topics, the database provides the names, authors, dates and institutions

for master's theses and doctoral dissertations but not the abstracts. Only one in 20 is available in full text through links to National Archives and Library Canada.

<http://www.ucfv.bc.ca/aded/encyclopedia/>

OTL

The Office on Learning Technologies works to raise awareness of the opportunities, challenges and benefits of technology-based learning and to act as a catalyst for innovation in the area of technology-enabled learning and skills development. The OTL database records all the research that has been funded through OLT since its inception.

http://www.hrsdc.gc.ca/en/hip/lld/olt/01_index.shtml

UNESCO

The United Nations Educational, Scientific and Cultural Organisation database provides access to Canadian sections of international documents, particularly those related to the International Conferences on Adult Education.

<http://portal.unesco.org/>

Appendix B: Annotated Reference List

ABC Canada (2002) *Non-participation in literacy and Upgrading programs: A national study*. Toronto: ABC Canada. ERIC Reproduction Document ED 480 683

The reasons for nonparticipation in adult literacy and upgrading programs were examined in a national study during which interviews were conducted in 12 Canadian provinces with 44 adults who had never participated in a literacy or upgrading program. Most interviewees indicated that they had experienced transition points at which they considered participating in a literacy program or upgrading program. However, a range of diversionary factors such as life context and highly developed coping strategies made such programs appear irrelevant to potential learners. In addition, intervening factors reflecting the particular constraints of their lives (including economic factors, family and child care responsibilities, and other structural barriers) made formal educational programs seem unattainable. The following conclusions were drawn: (1) strategies aimed at engaging larger numbers of potential learners in literacy or upgrading programs must be multifaceted and address both structural and perceptual factors; (2) strategies to address perceptual factors should focus on dislodging inaccurate assumptions about the nature of literacy and upgrading programs; and (3) outreach strategies aimed at potential learners should use positive images that speak to people's strengths.

Ahlstrand, A.L., Bassi, L.J. & McMurrer, D.P. (2003) *Workplace education for low-wage workers*. Kalamazoo, MI: Upjohn Institute for Employment Research. ERIC Reproduction Document ED 478 956.

The training being provided to low-wage workers, factors affecting the availability and effectiveness of such training, and training outcomes were examined. Data were gathered through interviews with 40 of the 192 employers most heavily invested in training for low-wage workers. Site visits were conducting at 8 of the 40 employers and case studies written. The main factors motivating above-average commitment to training for lower-wage workers were: believing that it is "the right thing to do"; understanding the positive impact of such training on business goals and needs; and wanting to appease external forces (including the government and clients). Barriers to training for lower-wage workers included: the confined nature of lower-wage jobs, lack of evidence of the effectiveness of such training, conflicts between downsizing and training, and high turnover among lower-wage workers. Leadership commitment and creation of an environment flexible enough to promote widespread use of training appeared to be the most effective strategies for overcoming those barriers.

Alberta Learning (2002) *Campus Alberta – A policy framework*. Edmonton: Alberta Learning. ERIC Reproduction Document ED 468 178.

Campus Alberta is a key framework under which Albertans can pursue and achieve their lifelong learning goals. Campus Alberta is neither a program nor an institution, but rather a concept, a set of principles and a way in which the learning system works to deliver seamless learning opportunities for Albertans. In this new concept, both formal and informal learning activities are recognized. The focus extends beyond individuals of "traditional" education age to include people of all ages. Through Campus Alberta, the learning system is: (1) learner-centered; (2) collaborative; (3) accessible; (4) innovative; and (5) responsive. The objectives of Campus Alberta are to eliminate barriers in learning and to foster lifelong participation in learning by increasing learners' ease of entry into and movement within the learning system, by creating more flexible learning opportunities, and by ensuring that learners have the tools they need to succeed in learning.

Angelo, T.A. (1993) A "teacher's dozen": Fourteen general, research-based principles for improving higher learning in our classroom. *AAHE Bulletin*, April, 3-13.

Angelo bases his 14 principles on three main assumptions: (1) that to more effectively and efficiently promote learning, instructors need to know something about how learners learn; (2) there really are some general, research-based principles that instructors could apply to improve teaching and learning; and (3) that teaching is so complex and varied that instructors themselves must figure out whether and how these general principles apply to their particular discipline, course or learners. The 14 principles are:

- Active learning is more effective than passive learning.
- Learning requires focused attention and an awareness of the importance of what is to be learned.
- Learning is more effective and efficient when learners have explicit, reasonable, positive goals, and when their goals fit well with the instructor's goals.
- To be remembered new information must be meaningfully connected to prior knowledge, and it must first be remembered in order to be learned.
- Unlearning what is already known is often more difficult than learning new information.
- Information organized in personally meaningful ways is more likely to be retained, learned, and used.
- To learn well, learners need feedback on their learning, early and often; to become independent, they need to learn how to give themselves feedback.
- The ways in which learners are assessed and evaluated powerfully affect the ways they study and learn.
- Mastering a skill or body of knowledge takes great amounts of time and effort.
- Learning to transfer, to apply knowledge and skills in new contexts, requires a great deal of practice.
- High expectation encourages high achievement
- To be most effective, instructors need to balance levels of intellectual challenge and instructional support.
- Motivation to learn is alterable; it can be positively or negatively affected by the task, the environment, the instructor, or the learner.
- Interaction between instructors and learners is one of the most powerful factors in promoting learning; interaction among learners is another.

Archibald, J. & Urion, C. (1995) Ourselves, our knowledge. Establishing pathways to excellence in Indian education implementation: Challenges and solutions. *Canadian Journal of Native Education*, 21 (1).

A pilot study of the experiences of First Nations postsecondary graduates focused on the relationship between postsecondary education and employment, factors encouraging success, and barriers and problems faced by Native college students. The research model used was consistent with First Nations ways through respect for respondents, growth-oriented dialogue among participants, and the centrality of such fundamental principles as spirituality and sense of community. Data collection included mailed surveys, telephone interviews, and focus groups. Of 67 respondents, about 70% were women and most were graduates of the Faculty of Education (UBC). Principle sources of student support were First Nations people, institutions and agencies. Barriers were related to negative perceptions of UBC as an institution and to racism in various forms. Respondents reported little difficulty finding employment; two-thirds were working in a First Nations context and about two-thirds had worked in a field related to their university studies.

At the Native Education Centre (UBC), programs range from adult literacy to community college courses and job skills training. An adapted questionnaire was sent to 171 recent graduates of the Skills Training Programs; 33 responded. Success factors at NEC included supportive students and staff, First Nations identity, relevance of course content, and strict but helpful regulations. Barriers

included financial problems, and family responsibilities. Almost all respondents were employed in an area related to their training or were engaged in continuing education.

Baran, J., Berube, G., Roy, R. & Salmon, W. (2000) *Adult education and training in Canada: Key knowledge gaps*. Ottawa: Human Resources and Skill Development Canada. ERIC Reproduction Document ED 447 334.

This paper identifies important knowledge gaps in adult education and training (AET) in Canada and explores strategies to fill these gaps. Separate sections comprise a review of the current state of knowledge and major knowledge gaps relevant to each of three topics: (1) outcomes of adult learning, (2) motivations and barriers to adult learning, and (3) informal learning. The section on outcomes argues that more must be known about outcomes in terms of overall benefits and costs if the adequacy of AET in Canada is to be judged. The section on motivations and barriers, reports that key knowledge gaps include understanding reasons for participation and non-participation, and assessing whether individual decisions to participate or not are somehow unwarranted because they do not fully reflect associated costs and benefits. This section also argues that increasing knowledge of barriers to AET is a complementary strategy to estimating rates of return in the process of judging the adequacy of training levels in Canada and is essential in the design of specific policy actions towards the pursuit of equity goals. The section on informal learning questions whether informal training is the optimal way for some groups to acquire new skills. The report concludes by situating the issue of AET in the context of a strategy of human capital investment and provides a sense of what research priorities should be.

Bart, H.E. (2003) *Consumers, producers, and critical bystanders: Reflections of rural school dropout youth on their re-construction of a "need-to-work" in a "new economy" compared with an "official discourse" articulated in Manitoba government documents describing youth employment initiatives*. Master of Science thesis, University of Guelph, Guelph, ON.

This study examines the substance and nature of systemic barriers experienced by rural Southern Manitoba high school dropout youth, between 23 to 29 years, in their endeavours to complete their high school education and engage in employment opportunities. Their narrative is compared with an "official" notion of employment promoted by government rhetoric and manifest in "transition-to-work" programs in Manitoba. The discourse of these youth both contests and supports a dominant discourse along a number of lines including: non-materialist values, work/life balance, labour as a noble cause, a reciprocal notion of work and learning, and community (not competition) at work. This discourse contrasts with a "new" economy discourse characterised by emphasis on: more jobs, increased mobility of labour, lifelong learning, corporate alliances, proliferation of information communication technology, and global competition.

Benn, R. (1997) Participation in adult education: breaking boundaries or deepening inequalities? Paper presented at the SCUTREA International Conference held in London, July 1997. Accessed November 22, 2005, from <http://www.leeds.aac.uk/educol/scutrea.html>

This paper argues that education is a divisive agent. It explores the premise that one of the characteristics which promotes participation in education is social activism; that is, people who participate are already active members of society, and hence already empowered stakeholders.

Braswell, M.C. (2003) *Conflict as a learning barrier: An examination of conflict styles in adult learning program students*. Master of Arts thesis, Royal Roads University, Victoria, BC.

This study examines whether individual conflict management style can act as a barrier to academic achievement. Thirty students in an Adult Learning Program (ALP) designed to help them complete their high school education and 28 comparable non-ALP students were given the Work Conflict Checklist to determine their conflict style. Non-ALP students were more than twice as likely to use the "competitive" style of conflict management than the ALP students.

Butler, J.L. (2004) *Tools with no warranty: The state promotion of entrepreneurship training in Saskatchewan*. Doctor of Philosophy dissertation, University of Saskatchewan, Saskatoon, SK.

In order to understand more clearly the role of entrepreneurship training programs (ETPs) in promoting the enterprise culture, and contributing to the changing face of entrepreneurship, findings are presented from a study of nine state-sponsored ETPs for marginalized individuals located throughout Saskatchewan. A multi-method approach was used, with both survey and interview data collected to explore the training agencies and their programs, and participants' experiences before, during, and after their training. The findings show that ETPs play a central role in promoting the enterprise culture. Despite the fact that the majority of participants were seeking alternatives to employment (rather than adopting wholeheartedly the tenets of the enterprise culture), their ETP infused them with feelings of optimism about entrepreneurship. Participants looked forward to the benefits of control, independence, and (for females) flexibility and personal fulfillment that they believed small business ownership offered. The ETPs contributed to the changing face of entrepreneurship by providing an opportunity for individuals not traditionally involved in entrepreneurship (women, Aboriginal peoples, and economically marginalized individuals) to do so. However, numerous barriers blocked participants' chances for entrepreneurial success. For those who had gone on to start their own business, their optimism waned in the face of the harsh realities of small business operation and failure. The agencies offering the ETPs attributed small business failure to participants' individual flaws and/or presented it as part of a valuable process of lifelong learning and personal development. As a case study, the research supports the conclusion that the expectations of entrepreneurship may be over-inflated, and consequently, the new self-employed are at risk to become part of a new underclass.

Carlton, S. & Soulsby, J. (1999) *Learning to grow older & bolder: A policy discussion paper on learning in later life*. Leicester, UK: NIACE Accessed November 21, 2005, from <http://www.niace.org.uk/Publications/L/LngOlder.htm>

NIACE believes that participation in learning sustains active, independent lives and empowers citizens. The Older & Bolder initiative believes that older people have a huge contribution to make from their accumulated experience, valuable to younger generations and to the whole community. Older & Bolder recognizes the absence from most educational provision of large groups of society, including those over 50, women, and members of black and minority ethnic communities and those without a history of any significant involvement in adult education are even more markedly absent. Much of the learning that has been taking place over the last 10 years involving older people has been provided by a wide range of non-traditional education providers. This very diversity, whilst being extremely innovative in delivery and content, has not necessarily made the best use of other resources and local expertise to ensure continuation and further development of that provision. Older people are becoming an increasingly larger proportion of society and they are slowly being recognised (by example) as having much to offer the whole community.

Conrad, P.A. (1991) *Learning American sign language: Adult learner perceptions*. Master of Education thesis, University of Alberta, Edmonton, AB.

The teaching of American Sign Language (ASL) is a relatively new discipline within adult education. Individual interviews were conducted with a sample of learners enrolled in a community college ASL program. Participants were selected purposively on the basis of their consistent study within the program, and their willingness to relate their personal perceptions. Data analysis identified six descriptive themes, common to all respondents: pursuit of individual goals, changing views of ASL and the Deaf community, transition between languages, barriers to learning ASL, supports to learning ASL, and personal growth. Desired program changes reflected personal needs. A discussion of findings noted similarities between the ASL experience and such areas of study as second language learning and cross-cultural studies.

Cumming, A. (1992). *Access to literacy for language minority adults*. ERIC Digest. ERIC Document ED 350 886

This digest describes factors that may restrict access to adult literacy programs and discusses several potential solutions to these problems. Although barriers and potential solutions apply to all minority groups, two populations often considered "at risk" – immigrant women and involuntary minorities – are given particular attention. Four types of barriers hinder adults' participation in formal education: institutional barriers including location, schedule, fees, site atmosphere; situational barriers including job commitments, home and family responsibilities, lack of money, lack of childcare, and transportation problems; psychosocial barriers such as attitudes, beliefs, values, past experiences as a student, self-esteem and the opinions of others; and pedagogical barriers such as a program's lack of responsiveness to interests, backgrounds, and existing skills of the groups they serve. The digest then describes several Canadian programs worth considering.

Cusack, S.A., Thompson, W.J.A. & Rogers, M.E. (2003) Mental fitness for life: Assessing the impact of an 8-week mental fitness program on healthy aging. *Educational Gerontology*, 29 (5), 393-404.

This study explored the impact of learning on health and provides a decade-long review of the research and development of the Mental Fitness for Life Program. The program is an 8-week series of intensive workshops that include: goal setting, critical thinking, creativity, positive mental attitude, learning, memory, and speaking your mind. Results illustrate the impact of the program on health, and the need to promote mental fitness, like physical fitness, as a health promoting behaviour that supports the progressive development of the individual across the lifespan.

Dench, S. & Regan, J. (2000) *Learning in later life: Motivation and impact*. DfEE Resesarch Brief No. 183. Nottingham, UK: Department for Education and Employment Publications. Accessed November 21, 2005, from

<http://www.employment-studies.co.uk/summary/summary.php?id=rr183>

This study explores the impact of learning on older people, their learning characteristics, motives to learn, reasons for not learning, future learning plans, barriers to learning, and perceptions of the impact of learning on their health and well-being. Data were also gathered on the health of participants and their wider social and political involvement. Indepth interviews were conducted with 33 older persons aged 50 to 71. The definition of learning used included both formal and informal learning. Key findings:

- 80% reported a positive impact from learning in at least one aspect of their lives.
- 42% reported an improvement in their ability to stand up and be heard and in their willingness to take responsibility.
- 28% reported increased involvement in social, community and/or voluntary activities.
- Being disabled or in poor health was viewed as a barrier to participation; however, higher proportions of learners with a disability or health problem reported positive benefits of learning compared to those in good health.
- While participation in learning declines after retirement, giving up work can also act as a trigger for new learning.
- The most important reasons for learning were wanting to keep the brain active, enjoying the challenge of learning new things, and wanting to learn more about personal interests. Other reasons were described as personal and instrumental.
- The most common reasons for not learning were a lack of time and a lack of interest in learning; 25% said they have done enough learning in their life and 22% believed themselves too old to learn. Family responsibilities were also important.
- Barriers to learning included disabilities (particularly limited mobility), difficulties with communicating (e.g., hearing, speaking), limited energy, and inability to live independently.

- Most preferred learning with others. Learning online can be isolating but can also lead to new interests and contacts.

Department of Education and Science, Ireland. (2000) *Learning for life: White paper on adult education*. Dublin: Department of Education and Science. ERIC Reproduction Document ED 471 201.

Lifelong learning became a governing principle of Irish educational policy in 2000. Participation trends in education were assessed including early school leaving by males, poor educational levels of older adults, low literacy levels throughout the population, and educational barriers experienced by women. Resulting government priorities for development of adult education emphasized these three core principles: (1) a systematic, holistic approach recognizing different levels of educational provision; (2) equality of access, participation, and outcome for adult learners with an emphasis on marginalized groups and those most at risk for failure; (3) acknowledgments of inter-culturalism that while Ireland is culturally heterogeneous, promotion of Irish language and culture through education is important. Specific policies proposed centered on expanding the flexibility and supply of core programs and services at the school, community, workplace, and higher education levels and on fee relief for those most at risk in those programs.

ERIC Clearinghouse on Disabilities and Gifted Education (ERIC EC) (2000) *Adults with learning disabilities*. Accessed November 12, 2005 from <http://ericec.org/faq/ld-adult.html>

This summary document provides links to ERIC digests, minibibliographies, frequently asked questions (FAQs), related internet resources, and internet discussion groups, as well as selected citations from the ERIC Database

Research has shown that learning disabilities do not disappear when one leaves school and that they occur across an individual's lifespan. Adults with LD show a wide array of critical characteristics that are problematic for them in their education, vocation, self-esteem, social interactions and independent living. Academic skills that were not mastered during school-age years remain difficult. Problems arise in reading, math, spelling and writing. There is a high probability that the source of the problems underlying the disability are psychological processes including cognition, perception, language, attention, motor abilities, and social skills.

Fagan, W.T. (1991) *Understanding learning participation in adult literacy programs*. St. Johns, NL: Memorial University of Newfoundland and Labrador. ERIC Reproduction Document ED 333 108.

Although the emphasis on adult literacy/basic education is increasing, the high dropout rate from programs in these areas is a concern. Why learners choose to participate or not to participate in such programs can be understood in terms of three sets of factors. Learner-inherent factors include self-evaluation, goals, and capabilities. Life factors include the conditions and circumstances surrounding an individual that affect enrollment and participation in adult education programs; three such factors are information, transitions, and barriers. Program factors, the nature of the educational programs available to adults, including organization, content, procedures, and personnel. It is not enough to understand these separately and independently. A more complete understanding of participation/nonparticipation must examine how these three sets of factors interact. The program must provide for interaction between instructor and students, students must understand how what they are learning relates to their life goals, and provision must be made for involvement of the learners in their learning.

Faris, R. (1995) *Lifelong learning on the knowledge highway. Access to lifelong learning opportunities on Canada's Information Highway: A background paper*. Victoria, BC: Golden Horizon Ventures. ERIC Reproduction Document ED 431 899

This report begins with a glossary and a learner-centred model in which the information highway links learners with learning opportunities provided through educational institutions, community

organizations, government, and business and industry. An overview is provided of the economic, technological, social, and education and training-related factors that have led to recognition in Canada and worldwide of the leading role that lifelong learning must play in preparing individuals for the competitive, information-based, global economy of the 21st century. Three challenges facing Canada are discussed: (1) economic and social restructuring; (2) situational, dispositional, and institutional barriers to lifelong learning; and (3) learning models in response to new learning technologies. Trends and best practices in lifelong learning, the formal education sector, and nonformal education sector are reviewed.

Feist, L. (2001) *Providing support to instructors incorporating web-based technology into their teaching*. Master of Education thesis, University of Alberta, Edmonton, AB.

Instructors were grouped into three groups depending on the length of time they had used Web-based technology in their teaching. Interviews with individuals in each group indicated that each group required different types of support, such as infrastructure and professional development. The study concludes that faculty professional development programs need to follow the principles of adult learning theory and develop mechanisms for identifying barriers to using web-based technology effectively in their courses.

Fichten, C.S., Asuncion, J.V., Barile, M., Fossey, M. & deSimone, C. (2000). Access to educational and instructional computer technologies for post-secondary students with disabilities: Lessons from three empirical studies. *Journal of Educational Media*, 25 (3), 179-201.

Findings from three studies indicate that the overwhelming majority of students with disabilities use computers and the Internet, but 41% of them need some type of adaptation to use computers effectively. Key findings emphasize advantages of computer technologies and delineate barriers to full access. The authors conclude that educational and instructional technologists, professors and planners need to be sensitized to and involved in the use of educational media in post-secondary curricula; and that designing for accessibility for students with disabilities from the outset creates a more equitable learning environment that provides opportunities for all students.

Fisher, M. (2005) *Informal learning of seniors in Canadian society*. NALL Working Paper, Toronto: OISE/UT. Accessed November 14, 2005, from <http://www.nall.ca/new/fisher.pdf>

A report arising from the New Approaches to Lifelong Learning (NALL) survey (Livingstone, 1999) of informal learning in Canada. A post-retirement study of seniors revealed that many continue to be avid learners into extreme old age. Learning for these seniors is so interconnected with daily activities and relationships that they deem it to be as natural and necessary as breathing. The major implications have to do with program planning for older adults. As unprecedented numbers of people enter retirement in the near future, educational organizations, retirement residences, and community groups must consider resource allocations, program development, and interfacing of elderlearning with the broader community for mutual benefit across the generations.

Fraser, J. (2002) *Determinants of health maintenance among older adults learning to use computers*. Ottawa: Confederation College of Applied Arts and Technology. Accessed November 12, 2005 from <http://dev.www.uregina.ca/catalist/research/>

In this quantitative study, four groups of older adult learners completed an age-segregated program for learning to use a computer. The participants responded to ten questions which described their educational experience, as determinants of health maintenance. The strongest determinants of health maintenance were correlations between social and self-esteem, self-esteem and memory, other activities and lifelong learning, memory and lifelong learning, and memory and physical energy. The values for social, lifelong learning, memory improvement and physical energy were statistically significant. The participants identified their learning as a social experience.

