A Profile of Literacy Skills and Needs for Halton

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- Janet Gambrell, Associate Dean, Liberal and Community Studies, Sheridan College
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- Kathy Mills, Projects Manager, Centre for Skills Development and Training
- Phyllis Sereda, Peel Adult Learning Centre

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Executive Summary

The study, *A Profile of Literacy Skills and Needs in Halton,* investigates the literacy skills and literacy needs of the Halton population. It assists educators, business and labour, not to mention government and civil society, to understand the social and economic conditions that influence literacy in Halton.

Literacy in Canada, Ontario and Halton is important not only to the individual but also to society. Lack of literacy skills in a society creates conditions for economic, social and political exclusion. The *Highlights* from the Canadian Report, *Reading the Future: A Portrait of Literacy in Canada* states:

> "Society rewards individuals who are proficient and penalizes those who are not, whether expressed in terms of employment opportunities and job success or active social, cultural and citizenship participation in society. Literacy is also important to nations, as these skills are building blocks. They enable the creation of a labour force capable of competing in a changing world – a key step to economic growth and improvement of the human condition. They are also the cornerstones of democracy and of the exchange of knowledge and information." (Statistics Canada, 1996a, p.1)

Today, adult educators no longer speak of being literate or illiterate but rather of a continuum of literacy skills. Location on that continuum affects an individual's daily interaction in the workplace and in the community. Essentially literacy skill levels speak to the varying capacities of individuals to understand and use information necessary to participate fully in modern society which increasingly requires higher communication and information processing skills (Statistics Canada, 1996a, p.1).

The factors influencing literacy are complex and are often interrelated. The International Adult Literacy Survey (IALS), a study conducted in 1994 in seven countries[1], provides information on the following three literacy domains: i) prose literacy (based on materials such as editorials, news stories, poetry and fiction), ii) document literacy (based on materials such as job applications, transportation schedules, maps, tables and graphics) and iii) quantitative literacy (numeric skills based on activities such as balancing a chequebook or figuring out a tip). The IALS data suggest that low levels of literacy skills are found in Canada particularly in Quebec and the Maritime provinces. *Highlights* of the report, *Reading the Future: A Portrait of Literacy in Canada* states:

i) about 22% of adult Canadians 16 years and over fall in the lowest level of literacy. They have serious difficulty dealing with printed materials and most likely identify themselves as people who have difficulties reading; and

ii) another 24-26% fall in the second lowest level. Such people can deal only with material that is simple and clearly laid out, and material in which the tasks involved are not too complex. They read, but not well (Statistics Canada, 1996a, p.2).

Regional differences in literacy skills are explained by differences in accessibility to education, hence, educational attainment. **Increasingly the completion of secondary school is being used as the benchmark or necessary basis for having developed a level of literacy skills.** It is also a benchmark for maintaining literacy skills. It is evident that public policy and a corresponding investment in education over the decades in Canada have increased access to education, educational attainment and greater literacy skills.

Ontario's literacy levels are somewhat higher than the national average with 55.8% of the Ontario adult population having sufficient literacy skills while the national average is 52.4% for Levels 3, 4 and 5 on the IALS. However, as reported in *Adult Literacy in Ontario: The International Adult Literacy Survey Results,* **20.2% of Ontario's adult population do not have basic literacy skills (Level 1) while a further 24% are considered to have inadequate literacy skills (Level 2) to meet changing labour market needs** (1998, p.3).

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[1] The countries participating in this study are Canada, Germany, Netherlands, Poland, Sweden, Switzerland and the United States.

IALS Halton Summary

Findings of the International Adult Literacy Survey (IALS) indicate that in Halton, approximately 20% of the adult population is at the lowest level of literacy, Literacy Level 1, for prose, document and quantitative literacy domains. **When Level 1 and 2 are collapsed, you have about 50% of the population at low literacy levels. For Halton, this means a slightly higher level of low literacy than that of Canada. This does not bode well for a society that claims that an educated workforce is the basis on which its communities will succeed in the global workplace.**

Younger generations have higher literacy skills than older population groups. This correlates with the literature and 1996 Census data for Halton. This pattern raises issues of employment and social integration as individuals age. Slightly more women than men are located in the lowest literacy levels in the region of Halton.

When looking at the IALS data for highest level of schooling, it demonstrates the relationship between educational attainment and literacy level. **Those individuals without their secondary school diploma are clustered in Level 1 and 2, low literacy skills (about 50% of the Halton adult population). This is quite a commentary on the literacy skill level of our community members. This relationship further affects an individual's life chances as demonstrated in the strong relationships among education attainment and income and regular employment.**

Literacy Risk Index

A Literacy Risk Index has been developed as a way of capturing the various factors contributing to a risk of literacy problems. Indexes are often used to bring together a set of complementary indicators to comment on particular phenomena. One example of this would be the Consumer Price Index, which brings together various economic indicators into one number that is an expression of how the price of goods and services for consumers is performing. A literacy index was used to explore and compare indicators of literacy among Halton's municipalities. Three indicators are used to build the Literacy Risk Index are. They are: i) highest level of schooling, ii) income and iii) unemployment rates. All data are derived from Statistics Canada special custom tabulations based on the 1996 Census.

The index number shows the comparative differences between the municipalities, relative to Halton as a whole. The Halton baseline is set at 100 to which the other municipalities are compared. A number below 100 means that the municipality is below the Halton average; a number above 100 means that the municipality is above the Halton average. The index number is calculated by dividing the municipality average by the Halton average, then multiplying the result by 100. For example, one of the indicators used is highest level of schooling, less than grade 9. For instance, 4.45% of the Burlington population has less than grade 9 schooling and 5.1% of Halton's population has less than grade 9 schooling. So the 4% is divided by the 5% and then multiplied by 100 to get an index score of 87.

Literacy Risk Index: Population 15+ years of age

The following table shows Halton Region compared to Ontario and some of the surrounding regions. The population 15 years of age and over is used from the general 1996 Census data available from Statistics Canada. The data shows that Halton Region fares better than both the Ontario average and the surrounding regions.

Literacy Risk Index (Ontario Baseline) – Halton and Surrounding Regions

Population 15+ (Ontario Baseline)	Peel Region	Halton Region	Dufferin County	Toronto	Hamilton-Wentworth
Less than Grade 9	80	49	68	121	115
Grade 9-13 without certificate	93	86	113	87	109
Income: Less than $10,000	94	85	95	104	100
Income: $10,000-$19,999	82	77	90	104	108
Labour Activity: Unemployed	88	61	57	118	100
Literacy Risk Index	**87**	**72**	**85**	**107**	**106**

Within Halton, the literacy risk index data reveals that generally, Oakville and Burlington are at less risk of literacy needs compared to Milton and Halton Hills. These differences hold true when controlling for the age distributions between the Halton communities.

The literacy risk index for lone parents in Halton indicates that only Oakville is at less risk of literacy needs compared to the whole Halton area. Halton Hills indicates the most risk of literacy needs for this group, followed by Milton and Burlington.

Report Highlights

- The patterns associated with age, gender and literacy level is similar in Halton to that of Ontario and Canada. The literacy levels of individuals vary with age. Younger generations have higher literacy skills than older population groups. This correlates with the literature and 1996 Census data presented in the report. These patterns raise issues of employment and social integration as people age. Slightly more women than men are located in the lowest literacy levels in the region of Halton. This varies from the discussion in the literature, which suggests gender differences do not appear to have statistical significance.

- The IALS survey data demonstrates similar patterns across Halton, which is consistent with the trends identified in the literature and the 1996 Census. Approximately 50% of those working in Halton do so using low literacy skills. This raises serious questions about the present literacy skills used in our economic sectors:

  - Is there an underuse of literacy skills hence a devaluing of human capital?

  - Do the literacy skills of our population deteriorate if they are not exercised in the workplace?

  - How do you build and maintain literacy skills appropriate to Canada's emerging role in the global economy?

  Public policy could direct investment toward the development of human capital to raise literacy skill levels that are necessary to create jobs in emerging sectors.

- This study clearly establishes that the region of Halton follows trends documented in the research on literacy. Strong relationships exist between:

  - Literacy skills and age

  - Literacy skills and education

  - Literacy skills and income

  - Literacy skills and employment

- This study demonstrates that increasing levels of poverty and disparity exist in Halton and given the significant relationship between poverty and literacy, we conclude that there is a need for literacy skill development for this specific population group. Those members of our community considered poor fall into many groups such as single parents, unemployed, working poor, disabled, etc. Therefore, reaching members of this group will require creative and flexible programming.

- A Literacy Risk Index has been developed as a way of capturing the various factors (income, education and employment) contributing to a risk of literacy problems. Within Halton, literacy risk varies, indicating a concentration of socio-economic factors that affect the attainment of literacy skills.

In addition, the study draws to our attention the following:

- that to create a workforce capable of responding to the demands of the changing nature of work, economic development requires a social investment in education and training over the life course.
- that those receiving benefits, particularly from social assistance, are at high risk of deficits in literacy skills and may need literacy skills upgrading if they are to be meaningfully incorporated into the economic and social development of society.
- that older workers have not had the opportunity for educational attainment due to the lack of accessibility to public education before World War II; therefore, new training opportunities are required.
- that educational opportunities for immigrants to acquire literacy skills in English or French are necessary if these individuals are to be included in our economic prosperity and participate as full citizens in civil society.
- that training and education be innovative and adaptable to meet the needs of the many groups involved like youth, single parents, learning disabled, physically disabled, those with mental health issues and the prison population
- that many of those in need of literacy and educational upgrading cannot participate in such programs if supports are not offered such as transportation, flexible hours, child care, etc.
- that employers recognize the need to invest in employment based training to enhance and maintain the skills of their workers.
- that employers utilize fully the literacy skills of their employees
- that education and training to support literacy skills is part of the fight against poverty in Canadian society.

1. INTRODUCTION

In the spring of 1998, the Halton Adult Learning Network and the Peel Adult Learning Network amalgamated, creating one network for the regions of Peel, Halton and Dufferin. Timely and appropriate information that provides the new network with a literacy profile of the combined area, of the respective regions comprising this area, and of the municipalities located in the regions was deemed necessary to understand literacy needs and issues. Moreover, the Network needed information for public education and awareness, for planning and for program development. This document investigates the literacy skills and literacy needs of the Halton population. It assists educators, business and labour, not to mention government and civil society, to understand the social and economic conditions that influence literacy in Halton.

The purpose of this study is to develop a profile to:

- provide a description of literacy skills as measured by the International Adult Literacy Survey (IALS) by the Regional Municipality of Halton and its municipalities.
- provide a demographic and socio-economic profile of the different geographical areas using 1996 Census data.
- provide an information base necessary for the planning and development of a system of literacy services that addresses the changing needs of learners in Halton region.
- provide information useful in public education endeavours and in advocacy.

Section one of this report introduces the study and the methodology. Section two discusses the understandings and trends in literacy in Canada and Ontario today. The third section provides a demographic overview of the Region of Halton and the smaller municipalities within. The fourth section overlays three indicators identified as those that produce a higher risk to literacy skills to produce a "Literacy Risk Index". Finally, section five briefly outlines some of the major findings and conclusions that can be drawn from the data.

Figure 1 shows the Halton area under study.
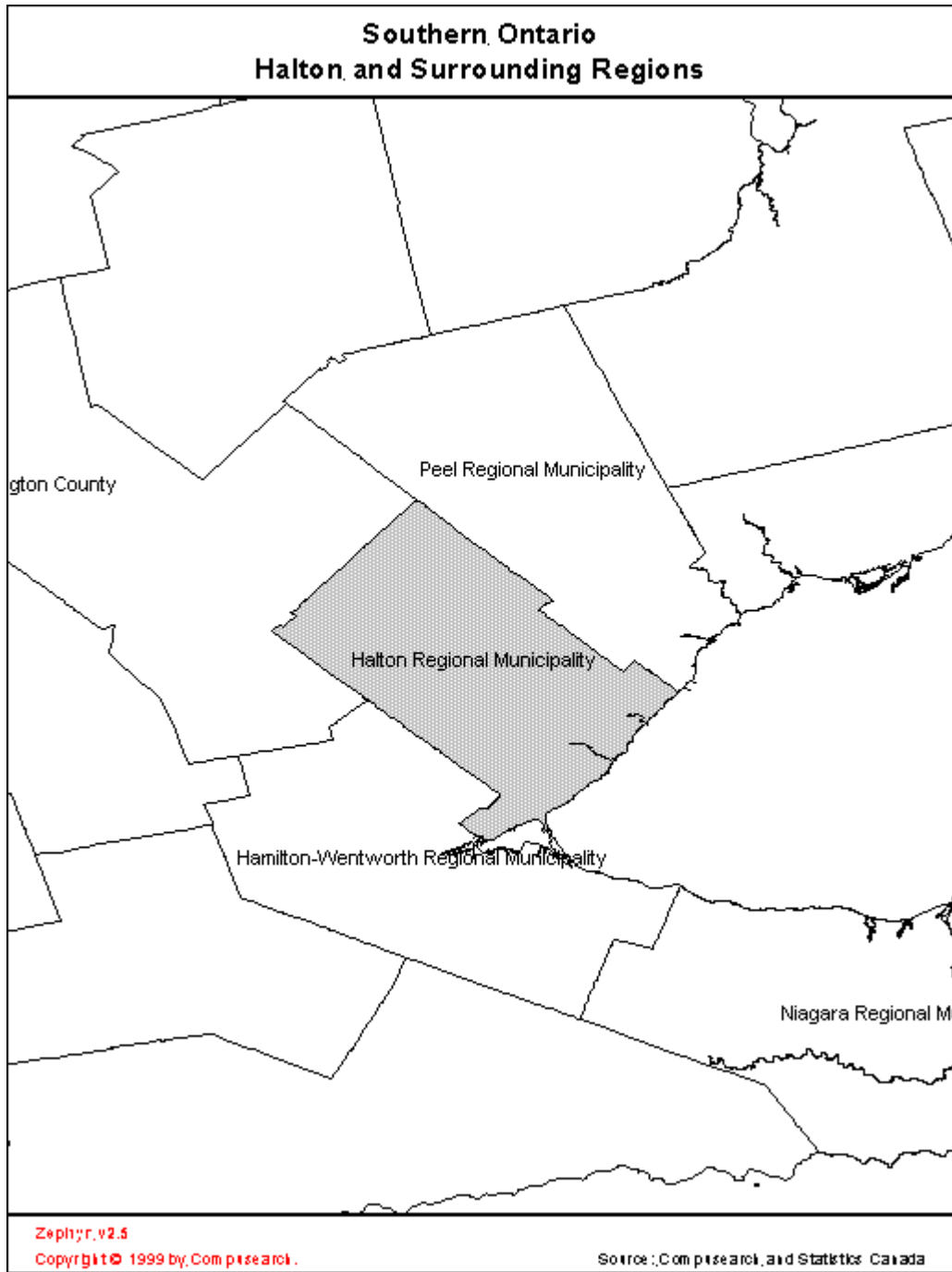
Figure 1. Map of Halton and Surrounding Regions

2. TOWARD A LITERACY FRAMEWORK: CURRENT TRENDS IN THE LITERATURE

Literacy in Canada is important not only to the individual but also to society. Lack of literacy skills in a society creates conditions for economic, social and political exclusion. The *Highlights* from the Canadian Report, *Reading the Future: A Portrait of Literacy in Canada* states:

> Society rewards individuals who are proficient and penalizes those who are not, whether expressed in terms of employment opportunities and job success or active social, cultural and citizenship participation in society. Literacy is also important to nations, as these skills are building blocks. They enable the creation of a labour force capable of competing in a changing world – a key step to economic growth and improvement of the human condition. They are also the cornerstones of democracy and of the exchange of knowledge and information (Statistics Canada, 1996a, p.1).

Today, adult educators no longer speak of being literate or illiterate but rather of a continuum of literacy skills. Location on that continuum affects an individual's daily interaction in the workplace and in the community. Essentially literacy skill levels speak to the varying capacities of individuals to understand and use information necessary to participate fully in modern society which increasingly requires higher communication and information processing skills (Statistics Canada, 1996a, p.1). What do we know about literacy trends and patterns in Canada and Ontario? How do these trends affect the development of human and economic capital? What do these patterns mean for quality of life in local communities?

The factors influencing literacy are complex and are often interrelated. Numerous studies discussing literacy in Canada are based on the International Adult Literacy Survey (IALS), a study conducted in 1994 in seven countries[2]. This survey provides information on the following three literacy domains:

  i) *Prose Literacy* – the knowledge and skills needed to understand and use information from tests which included such materials as editorials, news stories, poetry and fiction.

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[2] The countries participating in this study are Canada, Germany, Netherlands, Poland, Sweden, Switzerland and the United States.

ii) *Document Literacy* – the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and graphics.

iii) *Quantitative Literacy* – the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement.

Based on the test results incorporated into the IALS survey, respondents were classified into one of five levels for each type of literacy. Level 1 is the lowest level and Level 5 is the highest (See Appendix 1 for a full description of the literacy levels). The number of respondents in categories 4 and 5 is small, therefore, for purposes of analysis these categories have been collapsed into a 4/5 grouping.

The IALS data suggest that low levels of literacy skills are found in Canada particularly in Quebec and the Maritime provinces. *Highlights* of the report, *Reading the Future: A Portrait of Literacy in Canada* states:

i)   about 22% of adult Canadians 16 years and over fall in the lowest level of literacy. They have serious difficulty dealing with printed materials and most likely identify themselves as people who have difficulties reading; and

ii) another 24-26% fall in the second lowest level. Such people can deal only with material that is simple and clearly laid out, and material in which the tasks involved are not too complex. They read, but not well (Statistics Canada, 1996a, p.2).

Hoddinott interprets the same data similarly, writing that the aggregate national figure of 24% of adults is illiterate (*Hoddinott, 1998, p.10*).

Regional differences in literacy skills are explained by differences in accessibility to education, hence, educational attainment. Increasingly the completion of secondary school is being used as the benchmark or necessary basis for having developed a level of literacy skills. It is also a benchmark

for maintaining literacy skills. It is evident that public policy and a corresponding investment in education over the decades in Canada have increased access to education, educational attainment and greater literacy skills.

Ontario's literacy levels are somewhat higher that the national average with 55.8 % of the Ontario adult population having sufficient literacy skills while the national average is 52.4% (Levels 3/4/5). However, as reported in *Adult Literacy in Ontario: The International Adult Literacy Survey Results,* 20.2% of Ontario's adult population do not have basic literacy skills (Level 1) while a further 24% are considered to have inadequate literacy skills (Level 2) to meet changing labour market needs (1998, p.3). Table 1 displays the distribution of literacy skill levels in Canada and Ontario across the three literacy domains.

Table 1. Distribution of Literacy Skills in Canada and Ontario Across the Three Literacy Domains

| | Domains | | | | | | | | | | | |
| | Prose | | | | Document | | | | Quantitative | | | |
	Level 1	Level 2	Level 3	Level 4/5	Level 1	Level 2	Level 3	Level 4/5	Level 1	Level 2	Level 3	Level 4/5
Canada	22%	26%	33%	20%	23%	24%	30%	22%	22%	26%	32%	20%
Ontario	19%	28%	28%	25%	21%	22%	31%	26%	20%	23%	34%	23%

Source: Statistics Canada, Human Resources Development Canada, and National Literacy Secretariat. (1996) *Reading the Future: A Portrait of Literacy in Canada*. Ottawa, Canada: Minister of Industry.

IALS data also suggests that over the past five years literacy has not improved in Canada even though a greater number are completing their secondary school education. This suggests that literacy is also influenced by factors other than the successful completion of high school. Analyses of the IALS study suggests the following patterns which are pertinent to understanding the literacy continuum and issues of service in the Halton Region:

- *Education* – a strong and positive relationship exists between literacy skills and level of schooling. *Adult Literacy in Ontario: The International Adult Literacy Survey Results* describes the pattern found in Ontario, in Canada and internationally. This document concludes:
    - Those who have had no secondary school education are clustered in Level 1 on all scales.
    - Those who have attended secondary school, but not graduated have the highest concentration in Level 2 on all scales, although over 35% are at Level 3 or higher.
    - Those who have graduated from secondary school with no further education have the largest proportion in Level 3 on the document and quantitative scale. On the prose scale the numbers in Levels 2 and 3 are similar.
    - Those who have graduated from college also have large numbers in Level 3, but unlike secondary school graduates, the proportion in Level 4/5 is greater than that in Level 2 and there are less than 10% in Level 1 (1998, p.11).

While this relationship between literacy skills and the level of schooling is strong, a significant number of individuals do not fit this pattern, such that it should be recognized that "education does not 'fix' a person's literacy skills for a lifetime" (Statistics Canada, 1996, p.5).

- *Age* – as the population gets older, literacy skills tend to decrease (Ministry of Education and Training, 1998, p. 8). *Highlights* of the document, *Reading the Future: A Portrait of Literacy in Canada*, reminds us that the number of seniors (1.6 million) in Canada who perform at Level 1 literacy is significant and this affects their participation in their community and creates dependency on others (Statistics Canada, 1996, p.7).

  In the world of employment, age and literacy reflect two trends:
  i)   that youth are often in a *literacy surplus* situation, that is, their literacy skills are higher than that demanded in their employment
  ii)   that one in five older workers – that is the highest proportion of any age group – have a *literacy skill deficit* compared to the requirements of their job (Krahn and Lowe, 1998, p. 6).

- *Gender* – generally IALS information suggests that nationally women do better on prose and men slightly better on document and quantitative literacy activities. In Ontario, the pattern is similar with women performing better than men on prose literacy activities while men outperform women on document activities. There is no significant difference on quantitative tasks. However, for employed women there is a literacy "mismatch" between their literacy skills and those demanded by their employment. They are less likely than men to use their skills in the workplace (Krahn and Lowe, 1998, p.6). This has ramifications for income over the life course where IALS data systematically illustrates that women with stronger literacy skills are not as highly rewarded in the labour market as men with similar or even weaker literacy skills. As a matter of fact, gender overrides literacy in its effect on household or personal income. In all literacy levels, women are more likely than men to be living in low-income households. (Shalla and Schellenberg, Executive Summary, 1998, p. 2)

- *Income* – a strong and consistent relationship has been established between literacy and income. Those in the highest income quintile have literacy skills in Level 4/5 while those in the lowest income quintile tend to have literacy skills at Level 1. The risk of living in a household below

the commonly accepted Statistics Canada low-income cut-off is greater for those working age adults at Level 1.[3] For example, the data suggests that the possibility of living in a low-income household is 6 times greater for working age adults at Level 1 as compared to those at Level 4/5 (47% vs. 8%). (Shalla and Schellenberg, 1998, pp. 15-18).

Those who receive income supports have lower literacy levels than those who do not. Social assistance recipients have markedly lower skills than unemployment insurance beneficiaries or the general population. For example, a profile of social assistance recipients reveals that 60% have not completed high school as compared to 28% of unemployed insurance recipients and 29% of those receiving no income supports (Statistics Canada, 1996, p.8).

An important finding suggests that having literacy skills at one level above the lowest proficiency reduced from 42% to 22% the likelihood of living in a low-income household. (Shalla and Schellenberg, Executive Summary, 1998, 2).

- *Labour market participation* – a strong and direct relationship exists between unemployment and educational attainment with someone unemployed 3 times as likely to be at the lowest level of literacy (Level 1) than someone who is employed. Those at lower levels of literacy often move in and out of the labour force (Statistics Canada, 1996, p.8).

- *Immigration* – high levels of immigration from non-English or non-French speaking countries are associated with low or Level 1 literacy skills. On the other hand, those immigrating with English as their mother tongue tend to be well educated with literacy skills at the 4/5 levels. This pattern reflects Canada's immigration policy with highly educated business-class immigrants and, simultaneously, refugees from areas of the world where tragedy unfolds.

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[3] Statistics Canada Low-Income Cut-Off (LICOs) commonly referred to as the poverty line, is an estimate of which households of a given size must spend more than 20% of their income than the average on basic necessities (food, shelter and clothing). LICOs are based on population size of the area of residence and are annually updated. For example, in 1997 a family of four, living in an area with a population of 100,000 to 499,000 with a family income of $28,098, would be below the LICO and considered to be living in "straitened" circumstances or poor.

- *Work/occupation* – acquiring, maintaining and further developing literacy skills is linked to the type of work and/or occupation of an individual. The nature of the work performed by low-income workers makes few demands on literacy. This has serious implications not only for the employability of an individual but also for the creation of a highly literate labour force, one of the important pillars of economic development. Krahn and Lowe explore the match between the literacy requirements of Canadian jobs and the literacy skills of Canadian workers in their document, *Literacy Utilization in Canadian Workplaces*. They profile the use of literacy skills in the Canadian workplace in the following comment:

> By far, the most common basic literacy task performed by employed Canadians is reading memos and letters – 52% report that they do so daily. It is less common to read reports, articles and journals (35%), or to work every day with bills, spreadsheets or budget tables (34%).
>
> Writing is required somewhat less frequently than reading on the job. Writing letters or memos daily was a requirement for 35% of workers and filling out forms, bills, invoices or budgets for 30%. A large number of workers (37%) calculate prices, costs or budgets every day, but only 13% measure or estimate the size or weights of objects with such frequency.
>
> On the other hand, a substantial minority of workers do not regularly perform these literacy activities. The figures are striking; one in five workers rarely or never read letters or memos; about one-third rarely or never write letters or memos; and almost two out of five rarely or never calculate prices, costs, or budgets (1998, p.2).

Considerable variation exists in the literacy requirements for workers across industries and occupations. Many jobs require reading and writing skills, or mathematical skills, but not both. The lowest reading and writing skills are expected of those working in the primary industries and in construction. Manufacturing also requires less than the average reading and writing skills. On the other hand, construction and trade have the highest requirements for quantitative literacy. The finance industry requires the highest reading and writing skills, followed by public administration and transportation, communication and utilities. Finance, along with the transportation, communications and utility sector demand high levels in all three literacy domains. Managers and professionals have jobs with above average reading and writing requirements (Krahn and Lowe, 1998, p. 3).

The authors conclude, "almost three quarters of Canadian workers are employed in a job appropriate to their literacy skills" (1998, p.4). However, they suggest that over one-quarter of workers are a literacy "mismatch" for the work they are doing; specifically, almost 2.5 million workers have higher level literacy skills than are demanded by their job thus creating what Krahn and Lowe label a *literacy surplus*.[4] At the same time, they suggest that as many as 635,000 workers may not have sufficiently well-developed literacy skills to do their jobs adequately thus creating a *literacy deficit* (Krahn and Lowe, 1998, p.4-5).

Three central concerns emerge in this study: i) skill deficits which can be erased by training, ii) those deficits created by under-usage which represents serious long-term consequences for the development of human capital[5] and iii) that a job-skill gap exists where far more Canadian workers are under-employed or have a literacy skill surplus in their job. Another issue of importance is simply that literacy attainment is associated with work in the growth industries. For example, literacy skills, particularly prose, are high in those industries that are growing and low in the declining sectors. (Statistics Canada, 1996, p.8).

Literature Summary

It is not the purview of this document to discuss the policy and program implications of the findings of the various studies interpreting the IALS data. However, the Halton Social Planning Council would be remise if it did not draw attention to the following:

i)   that to create a workforce capable of responding to the demands of the changing nature of work the economy requires a social investment in education and training over the life course.

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[4] According to Krahn and Lowe, a literacy surplus exists when the literacy skills of an employee are greater than the frequency with which literacy tasks are performed in the workplace. A literacy surplus indicates high literacy skills and low literacy requirements for the job. On the contrary, a literacy deficit occurs where the literacy skills of an employee are lower and cannot meet the literacy tasks associated with the work. A literacy deficit occurs where one has low literacy skills and the job higher literacy requirements. The discussion of literacy deficits and surpluses should be understood as a description of the adequate or inadequate use of human capital in work in Canada.

[5] Under-usage is based on the belief that literacy skills deteriorate if they are not used. This represents a loss of human capital after an investment has been made.

ii)   that those receiving benefits particularly from social assistance have literacy skills upgrading needs that must be met if they are to be meaningfully incorporated into the economic and social developments of society.

iii)   that older workers have not had the opportunity for educational attainment due to the lack of accessibility to public education before World War II and this requires training opportunities.

iv)   that educational opportunities for immigrants to acquire literacy skills in English or French are necessary if these individuals are to be included in our economic development and participate in civil society.

v)   that training and education be innovative to meet the needs of the many groups involved.

vi)   that many of those in need of literacy and educational upgrading cannot participate in such programs if supports are not offered such as transportation, flexible hours, child care, etc.

vii)   that employers recognize the need to invest in employment based training to maintain the skills of their workers.

viii) that employers utilize fully the literacy skills of their employees

ix)   that education and training to support literacy skills is part of the fight against poverty in Canadian society.

IALS Halton Summary

This section presents some of the prominent findings of the International Adult Literacy Survey (IALS). Both federal and provincial governments, in assessing literacy needs and informing their policies, programs and services, are using this study. The study assessed the skills of 5,660 Canadian adults, of which 1,925 Ontario adults participated in the survey. The IALS sample is not large enough to support the direct estimation of literacy skill profiles for sub-provincial geographies, such as regions or cities. To overcome this constraint Statistics Canada has developed a statistical methodology to *indirectly* estimate or predict *the most likely distribution* of literacy skills for small geographic areas such as cities and towns. This approach will allow users to build literacy skill profiles for practically any Census-based, sub-provincial geography in Canada. Since IALS sample size is relatively small, we have decided to focus on analyzing the IALS data at the Halton Region level and not at the local municipal level. When the data was reviewed, the patterns at the local level did not vary significantly from the Halton Region level patterns.

In this section, the three scales – prose, document and quantitative literacy – used in the IALS have been added and averaged to arrive at a singular IALS result. This survey provides information on the following three literacy domains:

a) *Prose Literacy* – the knowledge and skills needed to understand and use information from tests which included such materials as editorials, news stories, poetry and fiction.

b) *Document Literacy* – the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and graphics.

c) *Quantitative Literacy* – the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement.

Summary results for the region of Halton are presented in this section.

Halton

Table 2. IALS Literacy Levels, Halton

Halton									
Literacy Type	Total	1		2		3		4&5	
Prose	241,300	48,200	19.98%	78,100	32.37%	86,400	35.81%	28,600	11.85%
Document	241,300	49,800	20.64%	75,300	31.21%	78,500	32.53%	37,900	15.71%
Quantitative	241,300	41,600	17.24%	79,300	32.86%	91,300	37.84%	29,100	12.06%

In Halton, there are approximately 47,000 persons at Literacy Level 1 for all literacy domains. This represents about 20% of the population. When Level 1 and 2 are collapsed, you have about 50% of the population at low literacy levels. For Halton, this means a slightly higher level of low literacy than that of Canada. This does not bode well for a society that claims that an educated workforce is the basis on which Canada will succeed in the global workplace.

Average of Literacy Domains, Halton

	Level 1	Level 2	Level 3	Level 4/5
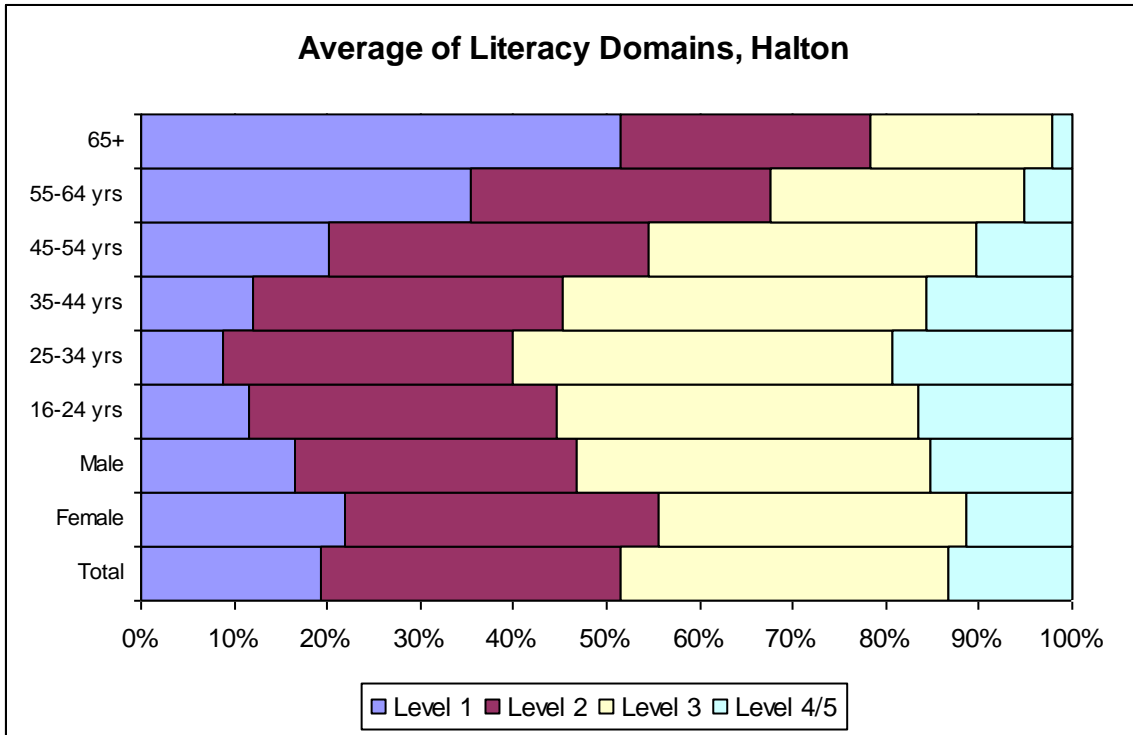
Figure 2. Average of IALS data by Age and Gender, Halton

In Figure 2, the pattern indicates that the literacy levels of individuals vary with age. Younger generations have higher literacy skills than older population groups. This correlates with the literature and 1996 Census data presented in this document and the pattern raises issues of employment and social integration as individuals age. Slightly more women than men are located in the lowest literacy levels in the region of Halton. This varies from the discussion in the literature, which suggests gender differences do not appear significant

Average of Literacy Domains, Halton

	Level 1	Level 2	Level 3	Level 4/5
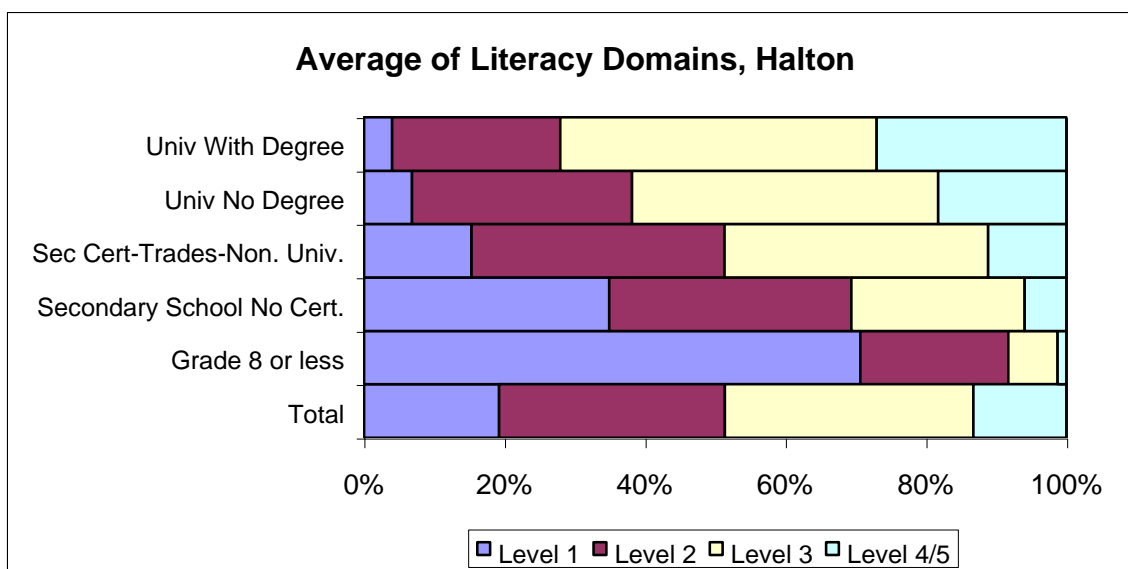
Figure 3. Average of IALS data by Highest Level of Schooling, Halton

Figure 3 demonstrates the direct relationship between educational attainment and literacy level. There is about 50% of the Halton population falling into low literacy skill levels (1 and 2). This is quite a commentary on the literacy skill level of our community members. This relationship further affects an individual's life chances as demonstrated in section 3 where Census information describes the relationships between education attainment and income and regular employment.

Those individuals without their secondary school diploma are clustered in Level 1 and 2, low literacy skills.

Average of Literacy Domains, Halton

Occupation	Level 1	Level 2	Level 3	Level 4/5

Not Applicable
Occs Not Elsewhere Classified
Other Crafts & Equip Oper Occs
Mat Handl & Rel Occs N.E.C.
Transp Equipm Oper Occs
Construction Trades Occs
Product Fabassemb & Repair Occs
Machining & Rel Occs
Processing Occs
Mining & Quar Incl Oil & Gas Occs
Forestry & Logging Occs
Fishingtrapping & Rel Occs
Farmhort & Ani Husb Occs
Service Occs
Sales Occs
Clerical & Rel Occs
Artistlitrecreat & Rel Occs
Occs in Medecine & Health
Teaching & Rel Occs
Occs in Religion
Occs in Soc Sc & Rel Fields
Occs in Nat Sceng & Maths
Manadmin & Rel Occs
Total Occupation

0%   20%   40%   60%   80%   100%

☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4/5

Figure 4. Average of IALS data by Occupation, Halton

Figure 4 shows the relationship between various occupations and literacy. The occupations are based on the 1991 Standard Occupational Classification as categorized by Statistics Canada. Occupation refers to the kind of work persons are doing, determined by their kind of work and the description of the most important duties in their job.

Average of Literacy Domains, Halton
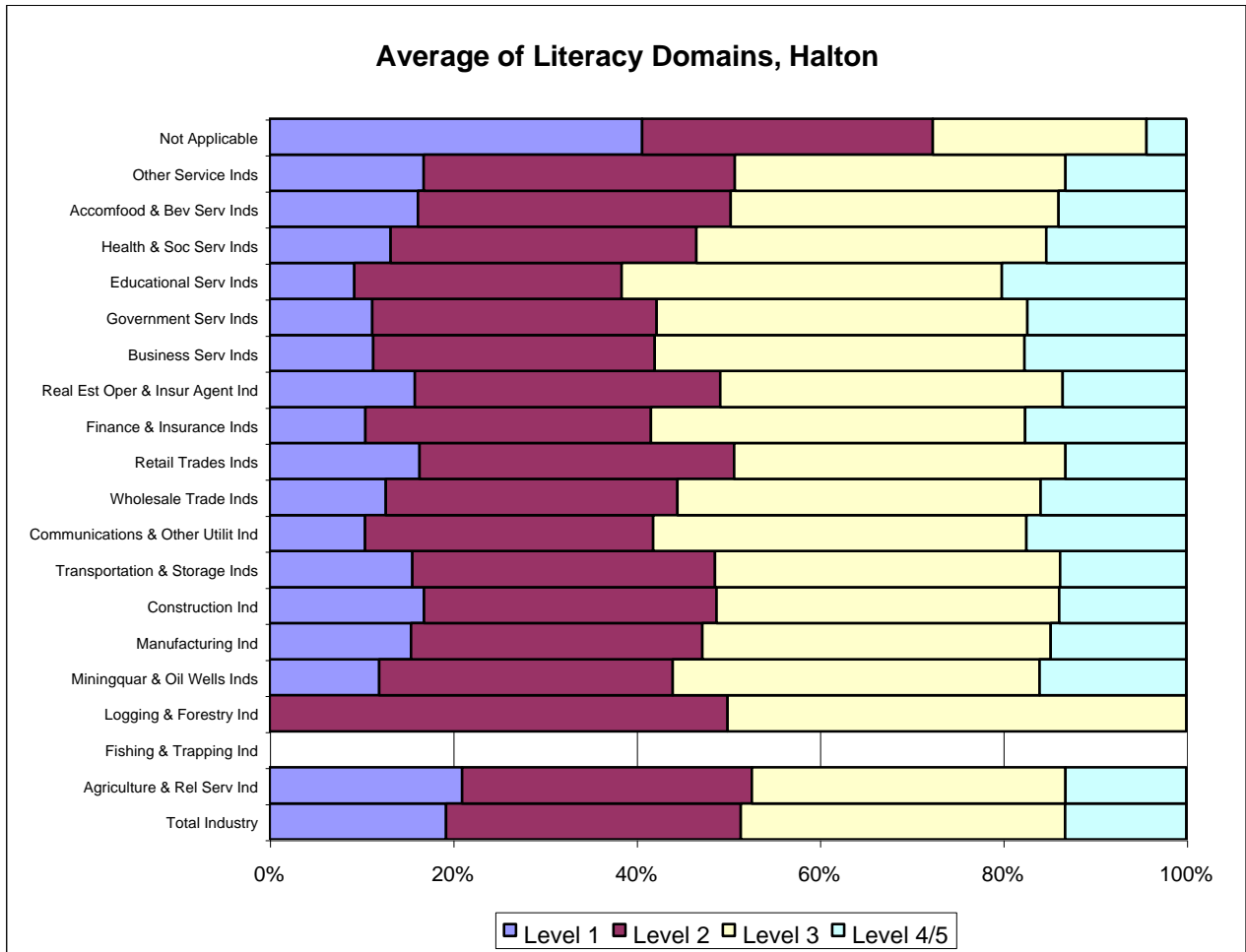
Figure 5. Average of IALS data by Industry, Halton

Figure 5 shows the relationship between various industries and literacy. The industry classifications are based on the 1980 Standard Industrial Classification as categorized by Statistics Canada. Industry refers to the general nature of the business carried out in the establishment where a person works, as indicated by the name of the employer and the kind of business, industry or service.

The survey data demonstrates similar patterns with the trends identified in the literature and the 1996 Census. Approximately 50% of those working in different occupations and industries do so using low literacy skills, that is, 51% in Halton. This raises serious questions about the present literacy skills used in our economic sectors:

- Is there an underuse of literacy skills hence a devaluing of human capital?

- Do the literacy skills of our population deteriorate if they are not exercised in the workplace?

- How do you build and maintain literacy skills appropriate to Canada's emerging role in the global economy?

Public policy should invest in human capital to raise literacy skill levels that are necessary to create jobs in emerging sectors.

3. DEMOGRAPHIC OVERVIEW

A demographic overview of the Regional Municipality of Halton provides a backdrop to understanding and assessing literacy needs in the community. The focus of this profile is on characteristics of the population that correspond with those identified as having an effect on literacy levels. The data used in the demographic overview is based on Statistics Canada 1996 Census data. Custom tabulations for the population 18 years of age and over were obtained to reflect the population served by the literacy programs and services.

Halton Demographic Profile

Table 3. Halton Demographic Summary

	Burlington	Oakville	Halton Hills	Milton
Population				
Total Population	136,980	128,405	42,390	32,105
Total Population as a % of Halton	40.3%	37.8%	12.5%	9.5%
Population 18+ years	75.8%	73.0%	73.6%	72.3%
Gender (Population 18+)				
Male	48.1%	48.2%	49.7%	49.3%
Female	52.0%	51.8%	50.3%	50.7%
Age Group (Population 18+)				
18-21 Years	6.6%	7.0%	6.5%	7.9%
22-30 Years	15.3%	14.8%	16.9%	14.7%
31-44 Years	30.3%	33.9%	35.0%	33.1%
45-64 Years	31.6%	31.3%	29.4%	32.7%
65+ Years	16.3%	13.0%	12.2%	11.5%
Household Composition				
Husband/Wife Families	88.6%	90.0%	89.7%	90.0%
Lone Parent Families	11.4%	10.0%	10.3%	10.1%
Family Income				
Average Family Income	$75,293	$89,224	$70,772	$75,308
% of Low-Income Families	8.3%	7.9%	4.7%	5.3%
Education Level (Population 18+)				
Less than Grade 9	4.5%	5.3%	6.0%	6.0%
Grades 9-13 without Certificate	16.5%	12.3%	20.5%	18.6%
Grades 9-13 with Certificate	14.8%	13.2%	16.4%	16.0%
Post-secondary	64.2%	68.7%	57.0%	59.4%
Labour Force Participation (Population 18+)				
Employed	95.0%	94.6%	94.7%	94.6%
Unemployed	5.1%	5.5%	5.3%	5.4%
Language				
Mother Tongue Non-official Languages	11.4%	19.1%	8.9%	9.6%

Table 4. Overall Halton Demographic Summary

	Halton
Total Population	339,880
Population 18+ years	74.1%
Gender (population 18+)	
Male	48.4%
Female	51.6%
Age group (Population 18+)	
18-21 Years	6.9%
22-30 Years	15.2%
31-44 Years	32.5%
45-64 Years	31.3%
65+ Years	14.1%
Household Composition	
Husband/Wife Families	89.4%
Lone Parent Families	10.6%
Family Income	
Average Family Income	$79,930
% of Low-Income Families	7.5%
Education Level (Population 18+)	
Less than Grade 9	5.0%
Grades 9-13 without Certificate	15.8%
Grades 9-13 with Certificate	14.5%
Post-secondary	64.5%
Labour Force Participation (Population 18+)	
Employed	94.7%
Unemployed	5.3%
Language	
Mother Tongue Non-official Languages	13.8%

Population

The total population in the Region of Halton is 339,880 persons in 1996. Halton Region consists of four municipalities: Burlington, Oakville, Halton Hills and Milton. Burlington has the largest population with 136,980 persons, followed by Oakville with 128,405 persons, Halton Hills with 42,390 persons and Milton with 32,105 persons. Figure 6 illustrates the distribution of Halton's population into the four municipalities.
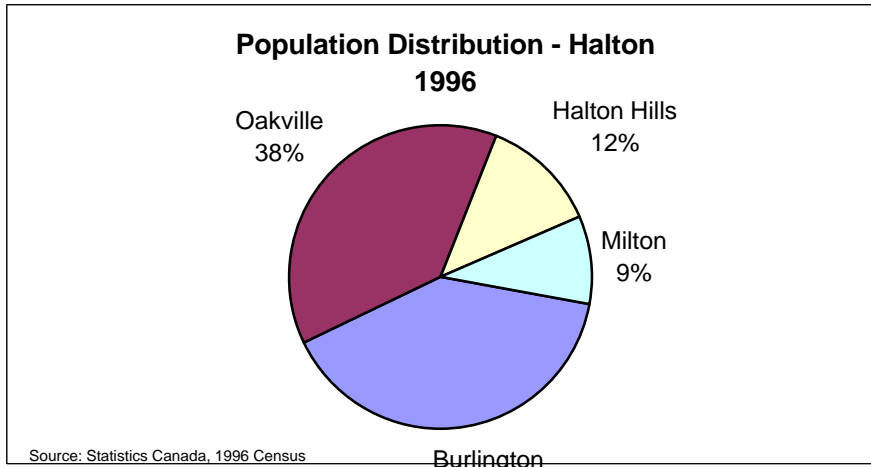
Figure 6. Population Distribution – Halton

Figure 7 shows that by 2006, the population is expected to increase to 164,300 in Burlington, 161,300 in Oakville, 54,800 in Halton Hills and 58,000 in Milton. This represents an increase of 27% for Burlington, 41% for Oakville, 49% for Halton Hills and 81% for Milton. The population is expected to increase to 438,400 persons for all of Halton. This represents an increase of 40% in Halton between 1991 and 2006.

Figure 7. Population Growth, 1991-2008 – Halton

Population 18+

The data used in the demographic overview is based on Statistics Canada 1996 Census data. Custom tabulations for the population 18 years of age and over were obtained to reflect the population served by the literacy programs and services.

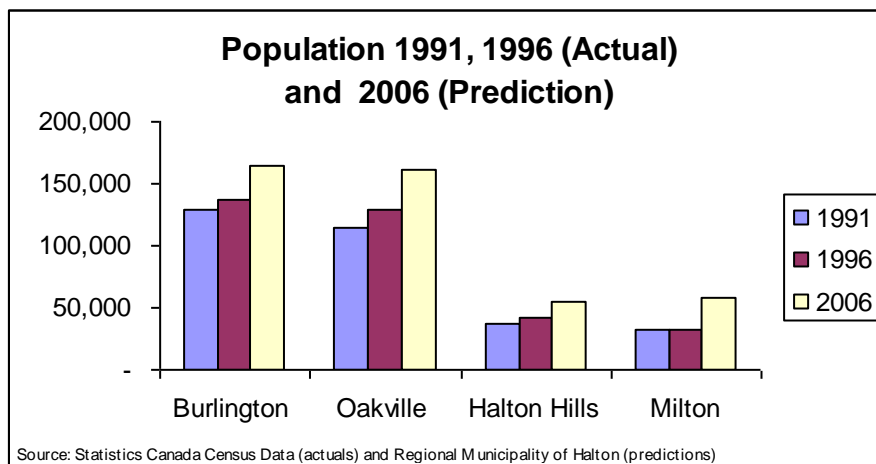Seventy-four percent of Halton's population is over 18 years of age. Burlington has the highest proportion of its population aged over 18 with 75.8% and Milton the lowest with 72.3%.

In Halton Region, 6.9% (17,340) of the population fall into the age category of 18-21 years. Milton has the highest proportion of this population group aged 18-21 with 7.9% (1,845) and Halton Hills the lowest with 6.5% (2,025).

Conversely, Halton Hills has the highest proportion of its population aged 22-30 years with 16.9% (5,270), and Milton has the lowest with 14.7% (3,420). Halton Region has 15.2% (38,395) of its population aged 22-30 years.

Halton's proportion of person's aged 31-44 is 32.5% (81,810). Halton Hills also has the highest proportion of its population aged 31-44 with 35% (10,925). Burlington has the lowest with 30.3% (31,445).

Halton has the proportion of its population aged 45-64 with 31.3% (78,930). Milton has the highest proportion of its population aged 45-64 with 32.7% (7,595) and Halton Hills the lowest with 29.4% (9,175).

Burlington has 16.3% (16,875) of its population 65 years and over, which is significantly higher than that of Oakville with 13% (12,150), Halton Hills with 12.2% (3,805) and Milton with 11.5% (2,660). Halton has a proportion of its population over 65 years with 14.1% (35,485).

Gender

All the municipalities in Halton have a slightly higher proportion of females to males in the over 18 population. The gender composition of the overall Halton population 18 years of age and over is

51.6% female and 48.4% male. Burlington has the largest difference with 52% of this population female and 48.1% male.

Household Composition

The Region of Halton has households consisting of an average of 89.9% husband/wife families. Oakville and Milton have the highest proportion both with 90%. The proportion of lone parent families in Halton is 10.1% (5,725). Burlington has the highest proportion of lone parent families with 11.4%, as demonstrated by Figure 8.
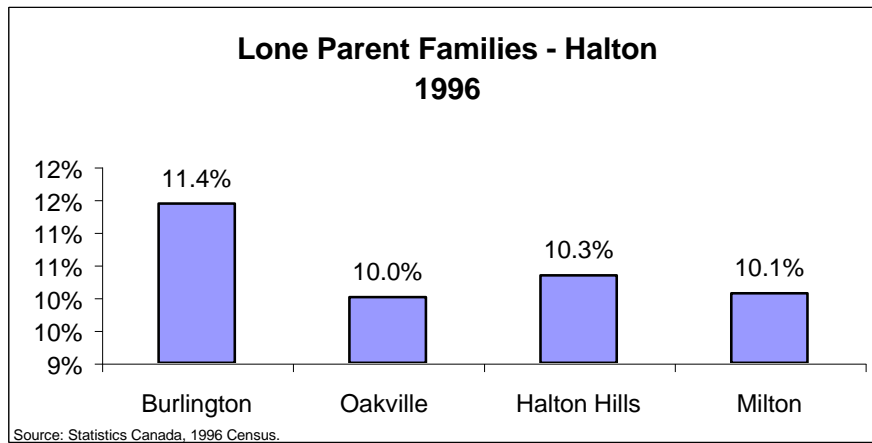

Figure 8. Lone Parent Families – Halton

Family Income

Figure 9 portrays the average family income for Halton's municipalities. The average family income in 1996 was $79,930 in Halton Region. Average family incomes are significantly different from a high of $89,224 in Oakville to a low of $70,772 in Halton Hills.
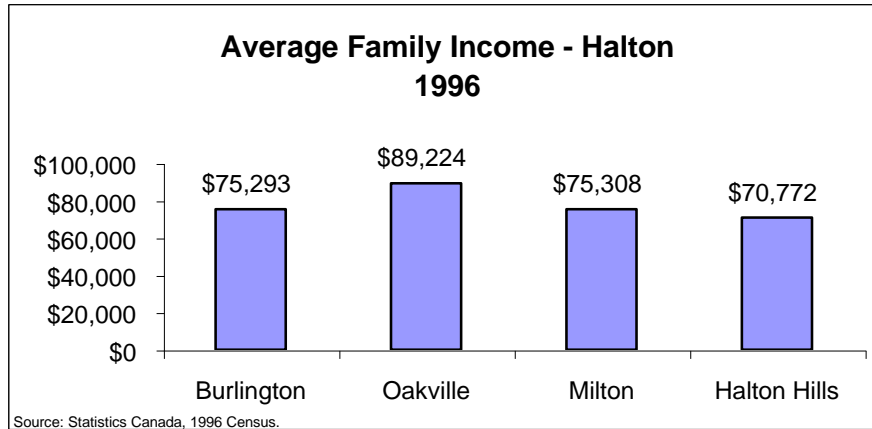
**Average Family Income - Halton
1996**

Figure 9. Average Family Income – Halton

Halton Region's proportion of low-income families[6] is 7.5% (7,140). A low-income family of four in Halton would need at least an annual income of $27,235 in order to meet basic costs, according to

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[6] The incidence of low income is the proportion or percentage of economic families or unattached individuals in a given classification below the low income cut-offs. These incidence rates are calculated from unrounded estimates of economic families and unattached individuals 15 years of age and over.

Measures of low income known as low income cut-offs (LICOs) were first introduced in Canada in 1968 based on 1961 Census income data and 1959 family expenditure patterns. At that time, expenditure patterns indicated that Canadian families spent about 50% of their income on food, shelter and clothing. It was arbitrarily estimated that families spending 70% or more of their income on these basic necessities would be in "straitened" circumstances. With this assumption, low income cut-off points were set for five different sizes of families.

Subsequent to these initial cut-offs, revised low income cut-offs were established based on national family expenditure data from 1969, 1978, 1986 and 1992. These data indicated that Canadian families spent, on average, 42% in 1969, 38.5% in 1978, 36.2% in 1986 and 34.7% of their income on basic necessities. By adding the original difference of 20 percentage points to the basic level of expenditure on necessities, new low income cut-offs were set at income levels differentiated by family size and degree of urbanization. Since then, these cut-offs have been updated yearly by changes in the consumer price index.

The following is the 1995 matrix of low income cut-offs. These are used to be consistent with the 1996 Census data.

Low Income Cut-offs for Economic Families and Unattached Individuals, 1995

Size of area of residence				
Family size	500,000 or more	100,000 to 499,999	30,000 to 99,999	Small Urban Regions	Rural (farm and non-farm)
1	16,874	14,473	14,372	13,373	11,661
2	21,092	18,091	17,965	16,716	14,576
3	26,232	22,500	22,343	20,790	18,129
4	31,753	27,235	27,046	25,167	21,944
5	35,494	30,445	30,233	28,132	24,530
6	39,236	33,654	33,420	31,096	27,116
7+	42,978	36,864	36,607	34,061	29,702

Statistics Canada. Burlington has the highest proportion of low-income families with 8.3% (3,300), followed by Oakville with 7.9% (2,820). Milton and Halton Hills have lower proportions of low-income families with 5.3% (465) and 4.7% (555) respectively.

Education Level

Figure 10 displays the educational attainment of Halton's population. In the Halton Region, the proportion of its population 18 years of age and over with an educational attainment of less than grade 9 is 5% (13,120). Of the four municipalities, Halton Hills and Milton have the highest proportion of their population whose highest level of education is less than grade 9 with 6% (1,885 and 1,390 respectively) followed by Oakville at 5.3% (4,945). Burlington has the lowest proportion with 4.5% (4,625).

The proportion of Halton's population who have some high school, but no certificate is 15.8% (39,865). Within Halton, Halton Hills has the highest proportion of its population who have some high school, but no certificate with 20.5% (6,400). Oakville has the lowest with 12.8% (11,990).

Nearly 21% or 51,695 persons in Halton have a university degree. Oakville has the highest proportion of its population with a university degree, with 26% (24,385). Halton Hills has the lowest proportion with 13.4% (4,175).
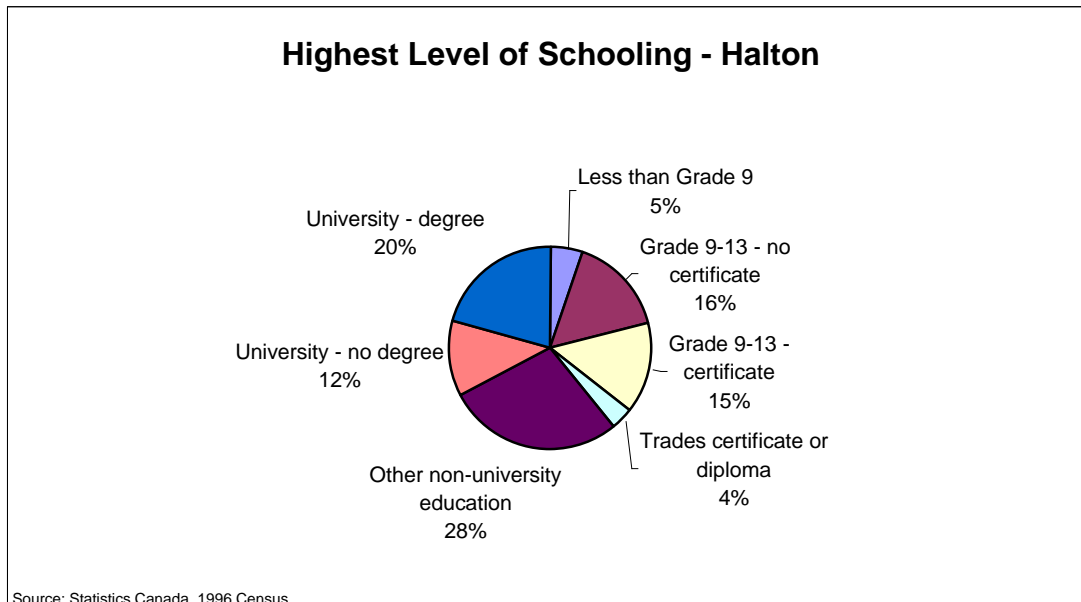
Highest Level of Schooling - Halton

University - degree
20%

Less than Grade 9
5%

Grade 9-13 - no certificate
16%

University - no degree
12%

Grade 9-13 - certificate
15%

Other non-university education
28%

Trades certificate or diploma
4%

Source: Statistics Canada, 1996 Census.

Figure 10. Highest Level of Schooling - Halton

Labour Force Participation

The Region of Halton has 94.7% of its labour force 18 years of age and over employed[7]. The proportion of its labour force 18+ unemployed is 5.3% (9,795). All the municipalities in Halton have similar proportions of their labour force employed at 95%. Figure 11 depicts the unemployment rate of Halton's municipalities, which ranges from 5.1% to 5.4%.

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[7] Refers to persons 18 years of age and over, excluding institutional students, who, during the week (Sunday to Saturday) prior to Census Day:
(a) did any work at all for pay or in self-employment ; or
(b) were absent from their job or business for the entire week because of vacation, illness, a labour dispute at their place of work or other reasons.

**Unemployment Rate - Halton
1996**
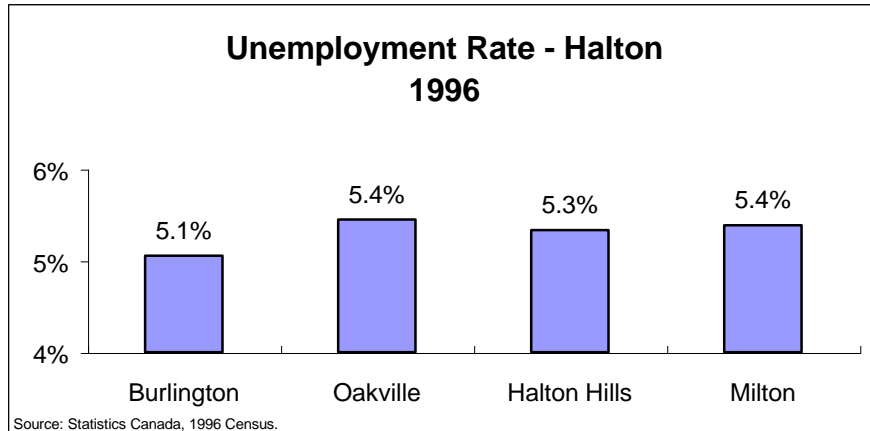
Figure 11. Unemployment Rate – Halton

Language

The proportion of the Halton population speaking mother tongue languages[8] other than English and French is 13.8% (46,680). Figure 12 points out that Oakville has a significantly higher proportion of its population with mother tongue languages other than English and French with 19.1% (24,360), compared to Burlington with 11.4% (15,530), Milton with 9.6% (3,030) and Halton Hills with 8.9% (3,755).

**Mother Tongue, Other than English or French
Halton, 1996**

Figure 12. Mother Tongue, Other than English or French – Halton

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[8] Refers to the first language learned at home in childhood and still understood by the individual at the time of the census.

Demographic Overview: Summary

Population

- Burlington has the highest proportion of its population 18+ years with 75.8% and Milton the lowest with 72.3%.
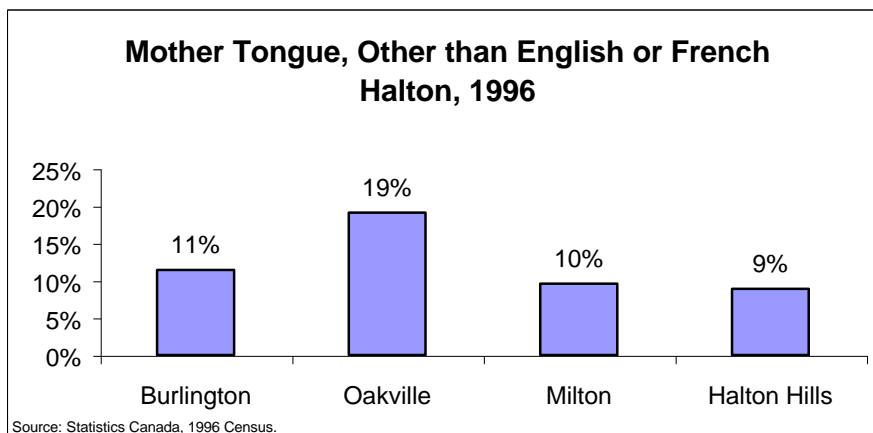
Gender

- Burlington has the lowest male proportion with 48.1% and highest female with 52%.

Age Group

- Among the municipalities, Milton had the highest proportion of its population 18-21 years of age with 7.9%. Halton Hills has the lowest with 6.5%.

- Conversely, Halton Hills has the highest proportion of its population aged 22-30 with 16.9% and Milton the lowest with 14.7%.

- Halton Hills has the highest proportion of its population aged 31-44 with 32.5% and Burlington the lowest with 30.3%.

- Milton has the highest proportion of its population aged 45-64 with 31.3% and Halton Hills the lowest with 29.4%.

- Burlington has the highest proportion of its population aged over 65 with 16.3% and Milton the lowest with 11.5%.

Household Composition

- Oakville and Milton have the highest proportion of husband/wife families with 90%.

- Burlington has the highest proportion of lone parent families with 11.4%.

Family Income

- Oakville has the highest average family income with $89,224 and Halton Hills the lowest with $70,772.

- Among the municipalities, Burlington has the highest proportion of low-income families with 8.3% and Halton Hills the lowest with 4.7%.

Education Level

- Halton Hills and Milton both have the highest proportion of their population whose highest level of education is less than Grade 9 at 6%. Burlington has the lowest proportion of its population whose highest level of education is less than Grade 9 with 4.5%.

- Oakville has the lowest proportion of its population who have some high school, but no certificate at 12.3%, while Halton Hills is the highest at 20.5%.

- Oakville has the highest proportion of its population that has a university degree at 26.0% and Halton Hills the lowest at 13.4%.

Labour Force Participation

- All of Halton's municipalities have a similar proportion of their labour force employed at 95%.

- Oakville and Milton have the highest proportion of their labour force aged 18+ unemployed with 5.4% and Burlington the lowest with 5.1%.

Language

- Oakville has the highest proportion of its population with mother tongue languages other than English and French with 19.1% and Halton Hills the lowest with 8.9%.

3. Literacy Risk Index

This Literacy Risk Index was developed as a way of capturing the various factors contributing to a risk of literacy problems. Indexes are often used to bring together a set of complementary indicators to comment on particular phenomena. One example of this would be the Consumer Price Index, which brings together various economic indicators into one number that is an expression of how the price of goods and services for consumers is performing. The selection of the indicators used in the Literacy Risk Index is based mainly on the literacy research derived from the IALS data, which indicated that education, income and employment are factors linked to a person's level of literacy. The Council saw the creation of an index as the best way to explore and compare indicators of literacy among Halton's municipalities.

There are three indicators used in building the Literacy Risk Index. They are highest level of schooling, income and unemployment. For the highest level of schooling, both less than Grade 9 and Grade 9-13 without a secondary school graduation certificate were used. For income, less than $10,000 income and income $10,000-$19,999 were used. Finally, the number of persons in the labour force that are unemployed was used. All data was derived from Statistics Canada special custom tabulations based on the 1996 Census.

The index number shows the comparative differences between the municipalities, relative to Halton as a whole. The Halton baseline is set at 100 to which the other municipalities are compared. A number below 100 means that the municipality is below the Halton average; a number above 100 means that the municipality is above the Halton average. The index number is calculated by dividing the municipality average by the Halton average, then multiplying the result by 100. For example, one of the indicators used is highest level of schooling, less than grade 9. For instance, 4.45% of the Burlington population has less than grade 9 schooling and 5.1% of Halton's population has less than grade 9 schooling. So the 4% is divided by the 5% and then multiplied by 100 to get an index score of 87.

Each Literacy Risk Index table combines the index numbers for the selected indicator of the municipality and averages these index numbers into a total index number, which is displayed on the graph for that factor. The selected factors are weighted equally.

The mid-point on the graph represents 100, or average. While caution must be taken in drawing conclusions from the index numbers, index totals that are higher than 100 represent a higher risk than those with a number below 100. These areas are at greater risk and require attention to bring them to the average. Caution should be exercised recognizing that the average may not represent adequacy in terms of the interplay of factors affecting literacy skills. Also, those areas scoring above the average have less vulnerability on the indicators employed in the Index but this can change in our dynamic socio-economic environment.

Literacy Risk Index: Population 15+ years of age

Table 5 and Figure 13 show Halton Region compared to Ontario and some of the surrounding regions. The population 15 years of age and over is used from the general 1996 Census data available from Statistics Canada. The data shows that Halton Region fares better than both the Ontario average and the surrounding regions.

Table 5. Literacy Risk Index (Ontario Baseline) – Halton and Surrounding Regions

Population 15+ (Ontario Baseline)	Peel Region	Halton Region	Dufferin County	Toronto	Hamilton-Wentworth
Less than Grade 9	80	49	68	121	115
Grade 9-13 without certificate	93	86	113	87	109
Income: Less than $10,000	94	85	95	104	100
Income: $10,000-$19,999	82	77	90	104	108
Labour Activity: Unemployed	88	61	57	118	100
Literacy Risk Index	**87**	**72**	**85**	**107**	**106**

Literacy Risk Index (Ontario Baseline)
Total Population 15+ yrs

Region	Index
Peel	87
Halton	72
Dufferin	85
Toronto	107
Hamilton	106

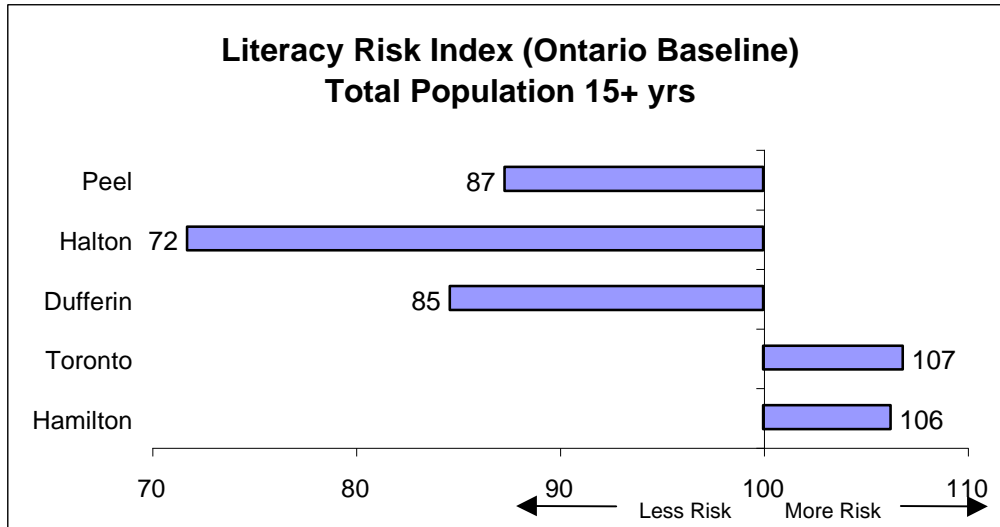70   80   90   100   110

← Less Risk   More Risk →

Figure 13. Literacy Risk Index (Ontario Baseline) – Halton and Surrounding Regions

Literacy Risk Index: Population 18+ years of age

Data used for this and following tables and graphs is based on Statistics Canada special data tabulations from the 1996 Census.

Table 6. Literacy Risk Index – Halton

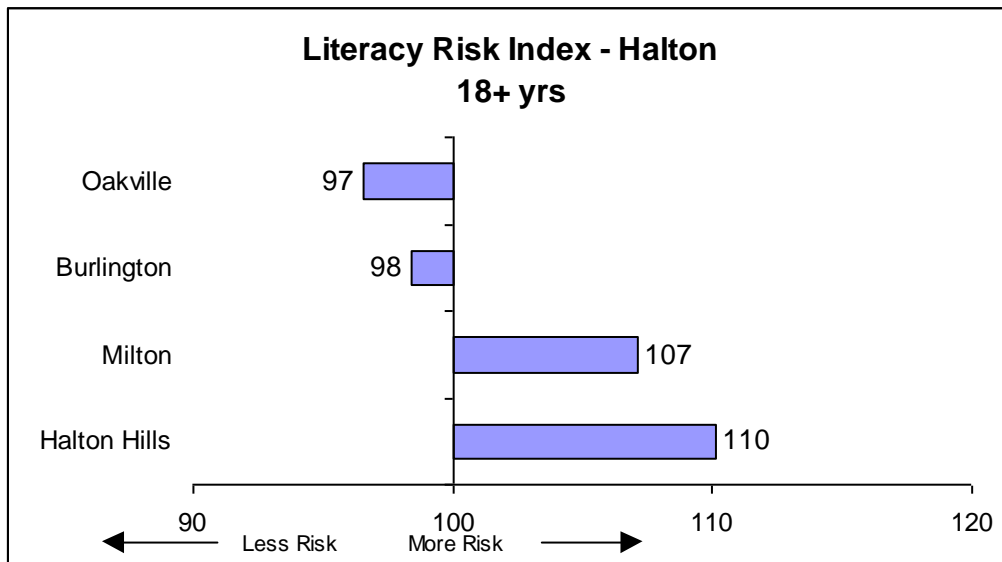| Total Population 18+ years	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	103	87	117	118
Grade 9-13 without certificate	81	105	117	130
Income: Less than $10,000	102	99	102	98
Income: $10,000-$19,999	93	106	97	103
Labour Activity: Unemployed	103	96	102	101
Literacy Risk Index	**97**	**98**	**107**	**110**

Figure 14. Literacy Risk Index – Halton

The overall literacy risk index for Halton in Figure 14 indicates that Oakville and Burlington are at less risk of literacy needs compared to Milton and Halton Hills.

Literacy Risk Index - Halton
18+ yrs

Oakville	96 / 97
Burlington	97 / 99
Milton	112 / 104
Halton Hills	113 / 109

90   100   110   120

← Less Risk   More Risk →
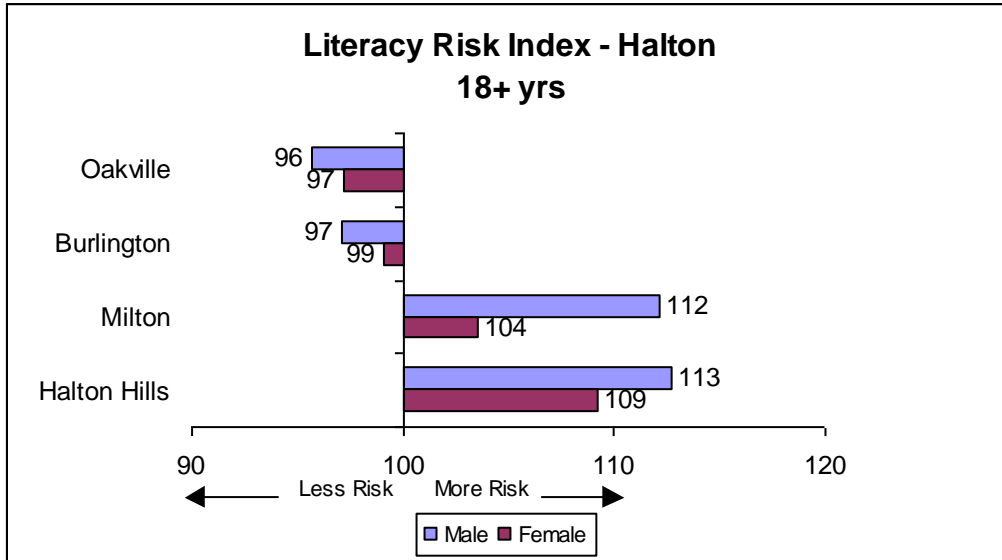
□ Male ■ Female

Figure 15. Literacy Risk Index: Male/Female (18+ years) – Halton

The risk of males and females in the population 18 years of age and over, as depicted in Figure 15, indicates that in Oakville and Burlington, females are only slightly more at risk than males, while in Milton and Halton Hills, it is the male population that is at more risk of literacy needs than females.

Literacy Risk Index: Population 18-21 years of age

Table 7. Literacy Risk Index (18-21 yrs.) – Halton

Total Population 18-21 years	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	75	144	0	245
Grade 9-13 without certificate	89	108	110	101
Income: Less than $10,000	100	101	100	95
Income: $10,000-$19,999	99	94	100	119
Labour Activity: Unemployed	113	89	106	92
Literacy Risk Index	**95**	**107**	**83**	**130**

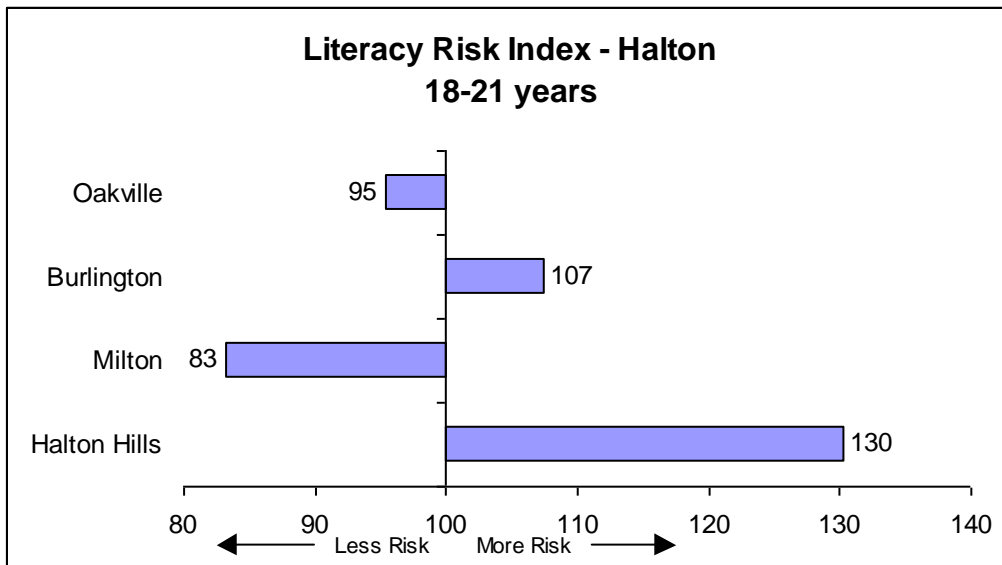Figure 16. Literacy Risk Index (18-21 yrs.) – Halton

The literacy risk index for 18-21 year olds in Halton, as displayed in Figure 16, indicates that Oakville and Milton are at less risk of literacy needs compared to the whole Halton Region. Halton Hills indicates the most risk of literacy needs for 18-21 year olds, although some of the figures are small and so further analysis would be important.

Figure 17. Literacy Risk Index: Male/Female (18-21 years) – Halton

The risk of males and females in the population 18 to 21 years of age, as depicted in Figure 17, indicates that in Oakville and Milton, females are only slightly more at risk than males, while in Burlington, it is the male population that is at more risk of literacy needs than females. The chart does not include Halton Hills because breakdown of male and female numbers was too small to provide accurate analysis.

Literacy Risk Index: Population 22-30 years of age

Table 8. Literacy Risk Index (22-30 yrs.) – Halton

Total Population 22-30 years	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	122	70	151	70
Grade 9-13 without certificate	79	96	145	136
Income: Less than $10,000	104	99	99	92
Income: $10,000-$19,999	93	106	107	97
Labour Activity: Unemployed	111	90	106	96
Literacy Risk Index	**102**	**92**	**122**	**98**

Figure 18. Literacy Risk Index (22-30 yrs.) – Halton

The literacy risk index for 22-30 year olds in Halton, as displayed in Figure 18, indicates that Burlington and Halton Hills are at less risk of literacy needs compared to the whole Halton area. Milton indicates the most risk of literacy needs for this age group, while Burlington indicates the least risk.

Literacy Risk Index - Halton
22-30 years

Municipality	Male	Female
Oakville	103	100
Burlington	90	95
Milton	116	118
Halton Hills	107	101

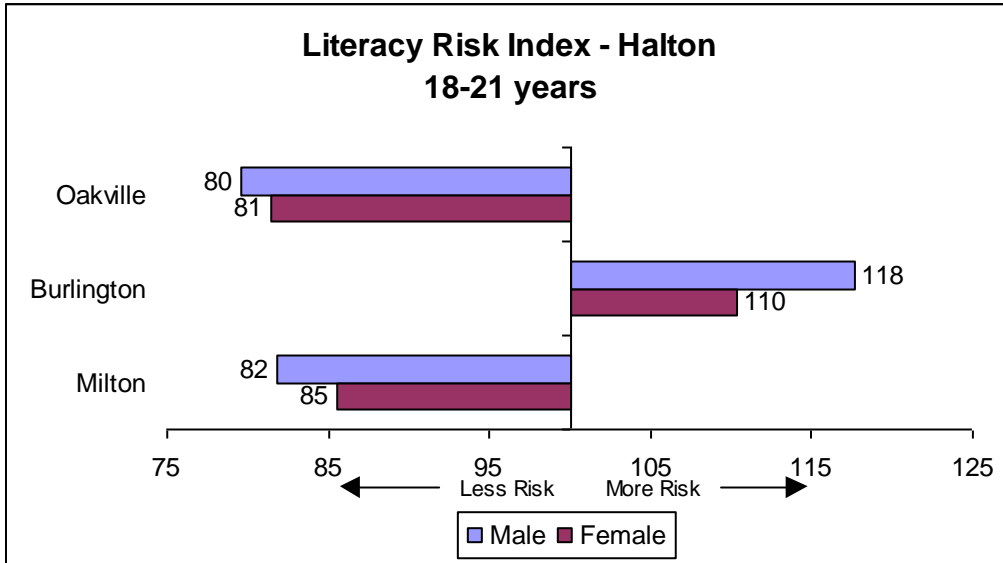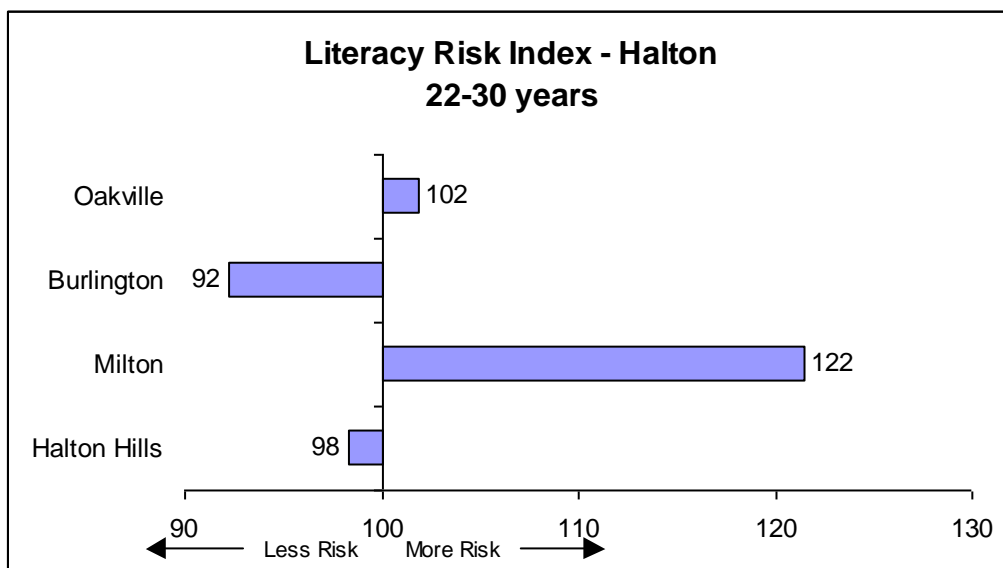85 95 105 115 125

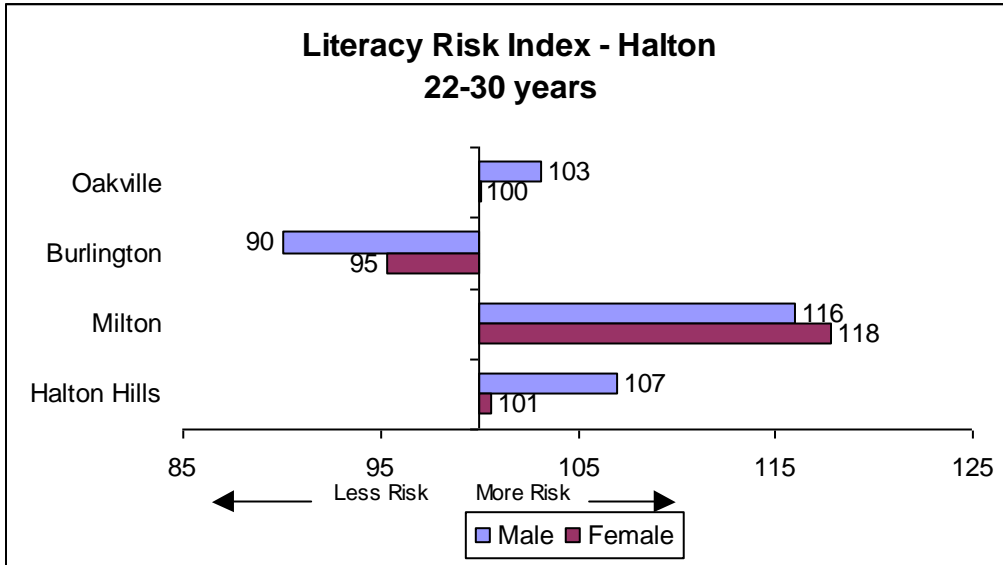← Less Risk   More Risk →

□ Male ■ Female

Figure 19. Literacy Risk Index: Male/Female (22-30 years) – Halton

The risk of males and females in the population 22-30 years of age, as depicted in Figure 19, indicates that Burlington is the only municipality where both the male and female population are below the Halton average. In Oakville, males are only slightly more at risk than females, who are at the Halton average. The Milton data indicates that females are slightly more at risk than the male population, while in Halton Hills, it is the male population that is at more risk of literacy needs than females.

Literacy Risk Index: Population 31-44 years of age

Table 9. Literacy Risk Index (31-44 yrs.) – Halton

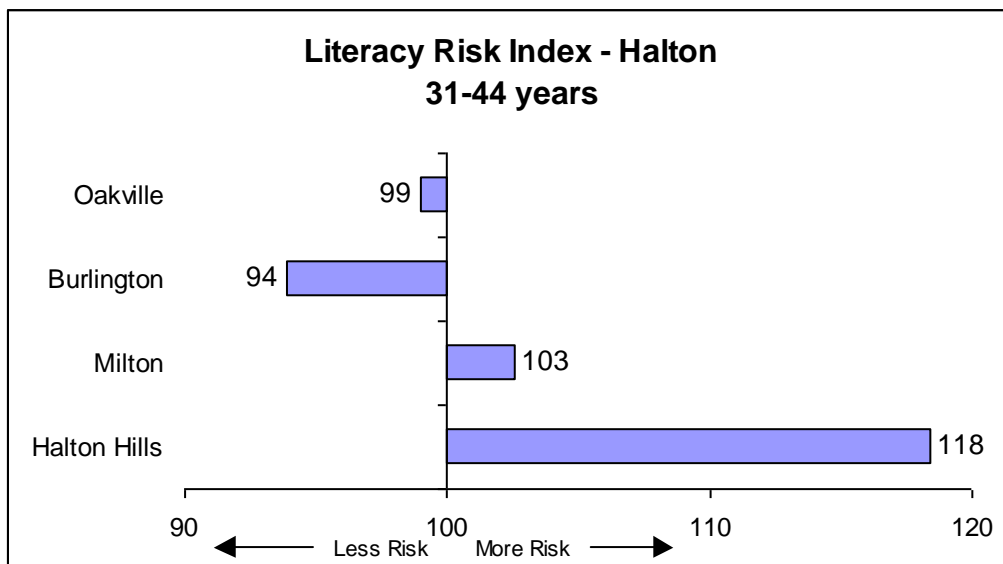| Total Population 31-44 years	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	129	69	70	126
Grade 9-13 without certificate	73	97	138	160
Income: Less than $10,000	102	95	103	107
Income: $10,000-$19,999	96	104	107	95
Labour Activity: Unemployed	95	105	95	104
Literacy Risk Index	**99**	**94**	**103**	**118**

Figure 20. Literacy Risk Index (31-44 yrs.) – Halton

The literacy risk index for 31-44 year olds in Halton, as displayed in Figure 20, indicates that Oakville and Burlington are at less risk of literacy needs compared to the whole Halton area. Halton Hills indicates the most risk of literacy needs for this age group.

Literacy Risk Index - Halton
31-44 years

Municipality	Male	Female
Oakville	93	102
Burlington	95	94
Milton	104	96
Halton Hills	130	112

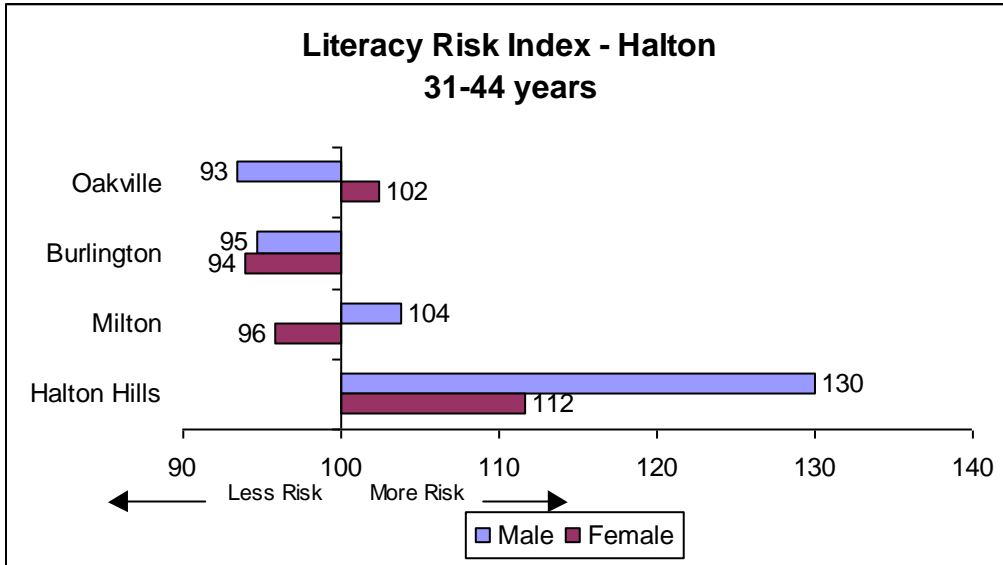Less Risk ← → More Risk

□ Male ■ Female

Figure 21. Literacy Risk Index: Male/Female (31-44 years) – Halton

The risk of males and females in the population 31-44 years of age, as depicted in Figure 21, indicates that Burlington is the only municipality where both the male and female population are below the Halton average. In Oakville, it is the female population that is more at risk of literacy needs. The Milton data indicates just the opposite, with the males are more at risk than the female population. In Halton Hills, it is the male population that is at significantly more risk of literacy needs than females, although both populations are well above the Halton average.

Literacy Risk Index: Population 45-64 years of age

Table 10. Literacy Risk Index (45-64 yrs.) – Halton

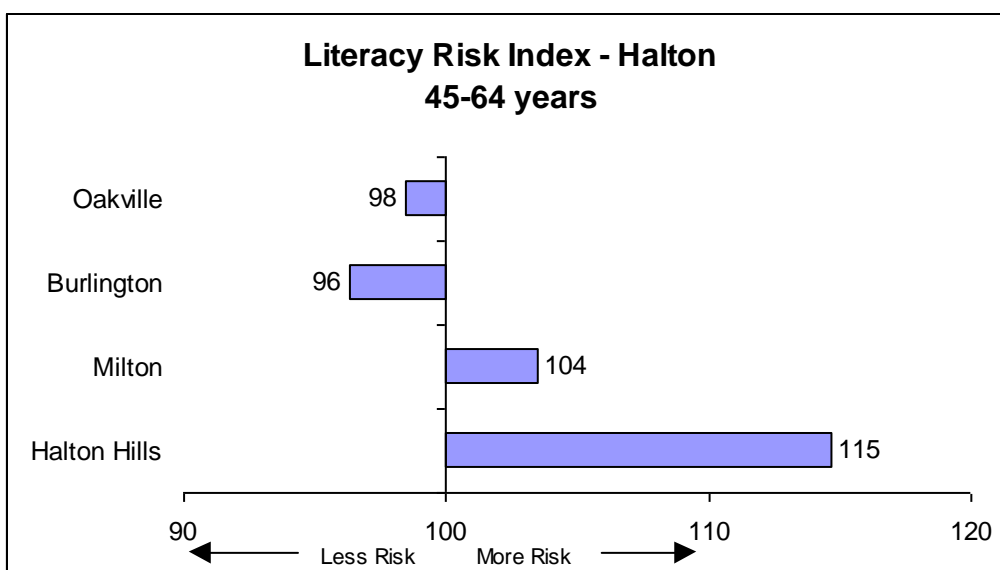| Total Population 45-64 years	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	114	77	118	123
Grade 9-13 without certificate	82	104	113	134
Income: Less than $10,000	101	100	95	100
Income: $10,000-$19,999	98	102	88	107
Labour Activity: Unemployed	97	98	104	111
Literacy Risk Index	**98**	**96**	**104**	**115**

Figure 22. Literacy Risk Index (45-64 yrs.) – Halton

The literacy risk index for 45-64 year olds in Halton, as displayed in Figure 22, indicates that Oakville and Burlington are at less risk of literacy needs compared to the whole Halton area. Halton Hills indicates the most risk of literacy needs for this age group, while Oakville indicates the least risk.
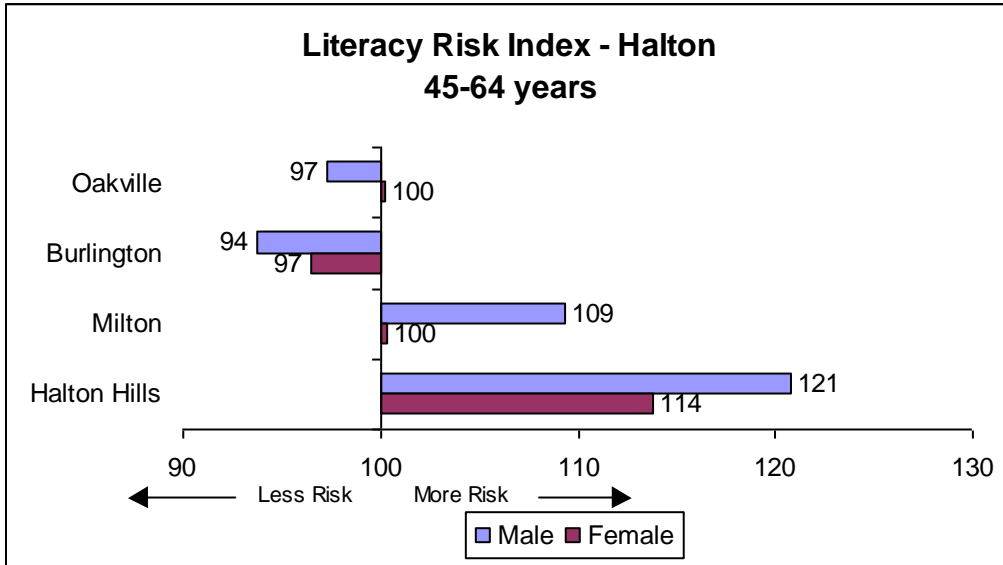
Figure 23. Literacy Risk Index: Male/Female (45-64 years) – Halton

The risk of males and females in the population 45-64 years of age, as depicted in Figure 23, indicates that Burlington is the only municipality where both the male and female population are below the Halton average. In Oakville, both the male and female population are at or near the Halton average. The Milton data indicates that the males are more at risk than the female population. In Halton Hills, it is the male population that is at more risk of literacy needs than females, although both populations are well above the Halton average.

Literacy Risk Index: Population 65+ years of age

Table 11. Literacy Risk Index (65+ yrs.) – Halton

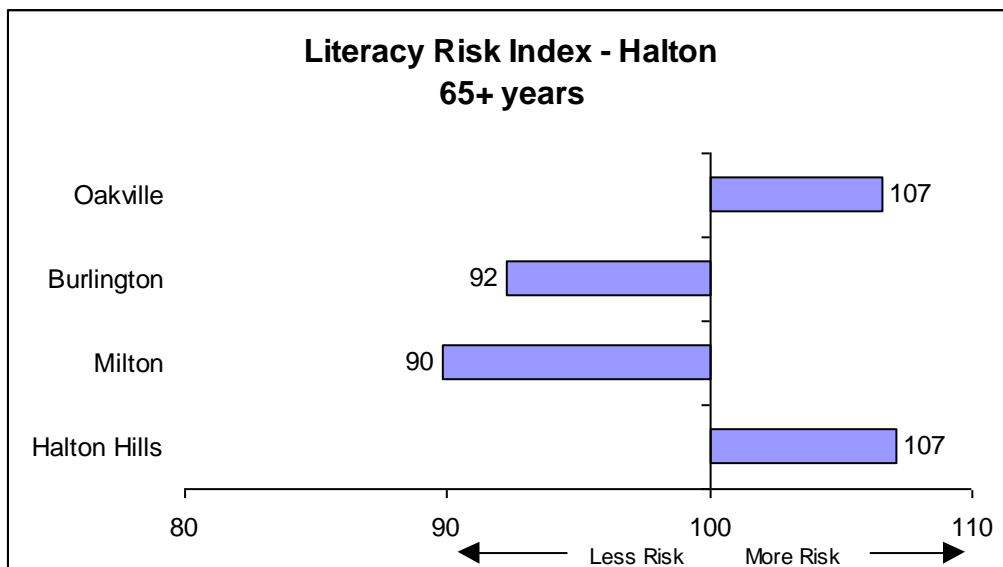| Total Population 65+ years	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	98	86	147	138
Grade 9-13 without certificate	87	104	99	122
Income: Less than $10,000	96	106	99	88
Income: $10,000-$19,999	94	100	105	117
Labour Activity: Unemployed	158	66	0	70
Literacy Risk Index	**107**	**92**	**90**	**107**

Figure 24. Literacy Risk Index (65+ yrs.) – Halton

The literacy risk index for 65+ year olds in Halton, as displayed in Figure 24, indicates that Burlington and Milton are at less risk of literacy needs compared to the whole Halton area. Halton Hills and Oakville indicate similar scores for being at the most risk of literacy needs for this age group.

Literacy Risk Index - Halton
65+ years

Oakville	Male 114, Female 93
Burlington	Male 88, Female 104
Milton	Male 97, Female 88
Halton Hills	Male 98, Female 90

80 90 ← Less Risk 100 More Risk → 110 120
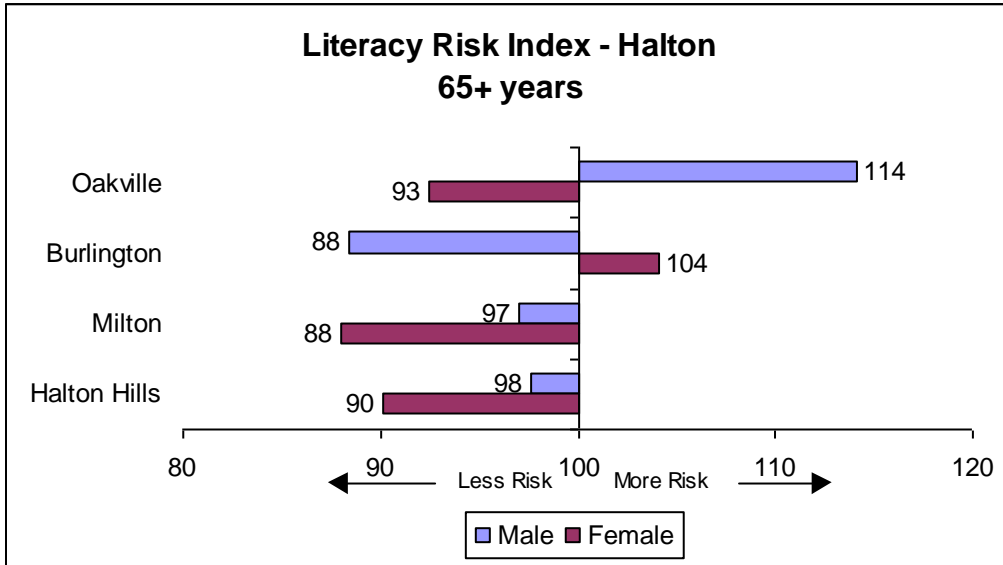
☐ Male ■ Female

Figure 25. Literacy Risk Index: Male/Female (65+ years) Halton

The risk of males and females in the population 65+ years of age, as depicted in Figure 25, indicates that Milton and Halton Hills are the municipalities where both the male and female population are below the Halton average. In Oakville, it is the male population that is significantly more at risk of literacy needs than the female population. The Burlington data indicates just the opposite, with the females more at risk than the male population.

Literacy Risk Index: Lone Parent Families

Table 12. Literacy Risk Index (Lone Parent Families) – Halton

Literacy Risk Index - Lone Parent	Oakville	Burlington	Milton	Halton Hills
Less than Grade 9	97	83	116	159
Grade 9-13 without certificate	78	107	120	121
Income: Less than $10,000	108	99	116	74
Income: $10,000-$19,999	94	109	92	94
Labour Activity: Unemployed	98	105	69	99
Literacy Risk Index	**95**	**101**	**102**	**109**

Literacy Risk Index - Halton
Lone Parent Families

Oakville	95
Burlington	101
Milton	102
Halton Hills	109

90   100   110
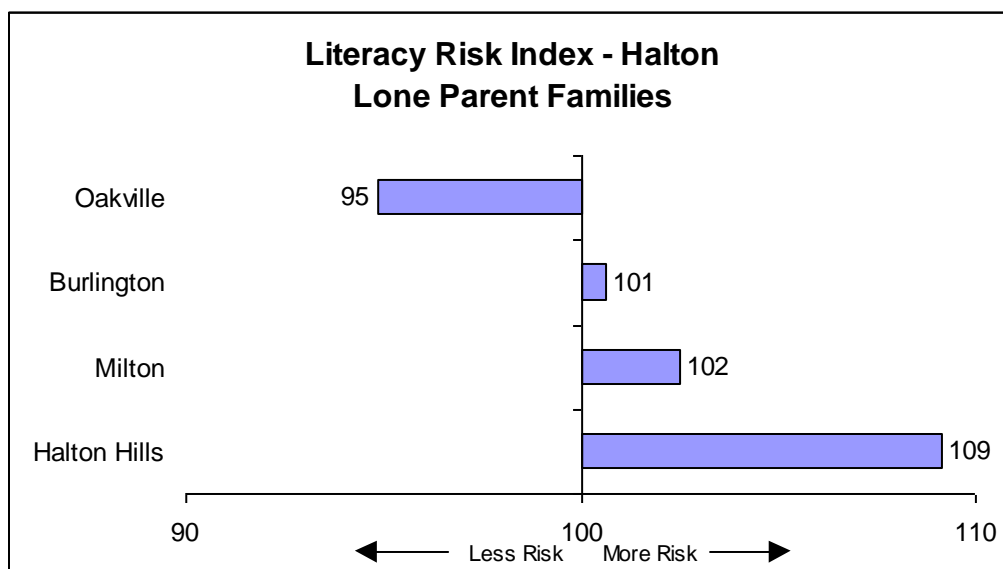◄— Less Risk   More Risk —►

Figure 26. Literacy Risk Index (Lone Parent Families) – Halton

The literacy risk index for lone parents in Halton, as displayed in Figure 26, indicates that only Oakville is at less risk of literacy needs compared to the whole Halton area. Halton Hills indicates the most risk of literacy needs for this group, followed by Milton and Burlington showing some risk of literacy needs.

4. Highlights

- The patterns associated with age, gender and literacy level is similar in Halton. The literacy levels of individuals vary with age. Younger generations have higher literacy skills than older population groups. This correlates with the literature and 1996 Census data presented in this document. These patterns raise issues of employment and social integration as people age. Slightly more women than men are located in the lowest literacy levels in the region of Halton. This varies from the discussion in the literature, which suggests gender differences do not appear to have statistical significance.

- The survey data demonstrates similar patterns across the study area, which is consistent with the trends identified in the literature and the 1996 Census. Approximately 50% of those working in different occupations and industries do so using low literacy skills, that is, 51% in Halton. This raises serious questions about the present literacy skills used in our economic sectors:
    - Is there an underuse of literacy skills hence a devaluing of human capital?
    - Do the literacy skills of our population deteriorate if they are not exercised in the workplace?
    - How do you build and maintain literacy skills appropriate to Canada's emerging role in the global economy?

  Public policy could direct investment toward the development of human capital to raise literacy skill levels that are necessary to create jobs in emerging sectors.

- This study clearly establishes that the region of Halton follows trends documented in the research on literacy. Strong relationships exist between:
    - Literacy skills and age
    - Literacy skills and education
    - Literacy skills and income
    - Literacy skills and employment

- We have demonstrated in the section on demographics that increasing levels of poverty and disparity exist in Halton, which suggests a need for literacy skill development for this specific population group. Those members of our community considered poor fall into many groups such as single parents, unemployed, working poor, disabled, etc. Therefore, reaching members of this group will require creative and flexible programming.

- Within Halton, literacy risk varies, indicating a concentration of socio-economic factors that affect the attainment of literacy skills. The literacy risk index should not be interpreted to suggest that lower risk areas do not need an appropriate array of literacy services. That would create an under-serviced area.

It is not the purview of this document to discuss the policy and program implications of the findings of the various studies interpreting the IALS data. However, the Halton Social Planning Council would be remise if it did not draw attention to the following:

- that to create a workforce capable of responding to the demands of the changing nature of work, economic development requires a social investment in education and training over the life course.

- that those receiving benefits, particularly from social assistance, have literacy skills upgrading needs that must be met if they are to be meaningfully incorporated into the economic and social development of society.

- that older workers have not had the opportunity for educational attainment due to the lack of accessibility to public education before World War II; therefore, new training opportunities are required.

- that educational opportunities for immigrants to acquire literacy skills in English or French are necessary if these individuals are to be included in our economic development and participate in civil society.

- that training and education be innovative to meet the needs of the many groups involved like youth, single parents, learning disabled, physically disabled, those with mental health issues and the prison population

- that many of those in need of literacy and educational upgrading cannot participate in such programs if supports are not offered such as transportation, flexible hours, child care, etc.

- that employers recognize the need to invest in employment based training to enhance and maintain the skillbase of their workers.

- that employers utilize fully the literacy skills of their employees

- that education and training to support literacy skills is part of the fight against poverty in Canadian society.

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Appendix 1 - Interpretive Descriptions Of Levels And Domains Used In The International Adult Literacy Survey

Scale score ranges and task samples.

	Prose	Document	Qualitative
Level 1 (0 - 225)	Use the instructions on the bottle to identify the maximum duration recommended for taking aspirin.	Identify the percentage of Greek teachers who are women by looking at a sample pictorial graph.	Fill in the figure on the last line of an order form, "Total with handling," by adding the ticket price of $50 to a handling charge of $2.
Level 2 (226 - 275)	Identify a short piece of information about the characteristics of a garden plant, from a written article.	Identify the year in which the fewest Dutch people were injured by fireworks, when presented with two graphs.	Work out how many degrees warmer today's forecast high temperature is in Bangkok than in Seoul, using a table accompanying a weather chart.
Level 3 (276 - 325)	State which of a set of four movie reviews was the least favourable.	Identify the time of the last bus on a Saturday night, using a bus schedule.	Work out how much more energy Canada produces than it consumes, by comparing figures on two bar charts.
Level 4 (326 - 375)	Answer a brief question on how to conduct a job interview, requiring the reader to read a pamphlet on recruitment interviews and integrate two pieces of information into a single statement.	Summarize how the percentages of oil used for different purposes changed over a specified period, by comparing two pie charts.	Calculate how much money you will have if you invest $100 at a rate of 6% for 10 years, using a compound interest table.
Level 5 (376 - 500)	Use an announcement from a personnel department to answer a question that uses different phrasing from that used in the text.	Identify the average advertised price for the best-rated basic clock radio in a consumer survey, requiring the assimilation of several pieces of information.	Use information on a table of nutritional analysis to calculate the percentage of calories in a Big Mac® that comes from total fat.

Source: Adult literacy in Ontario: the International Adult Literacy Survey results, Literacy and Basic Skills Section, Workplace Preparation Branch, Ontario Ministry of Education and Training, 1998.