

CLLN EXPLORES THE RELATIONSHIP BETWEEN LITERACY AND EARNINGS

# INVESTING IN UPSKILLING: Gains for Individuals, Employers and Government



Summary New Brunswick



## The Benefits of Investing in Literacy Skills

Canadians share a common interest in finding ways to raise incomes and reduce dependence on income support programs. Canadian Literacy and Learning Network (CLLN) and DataAngel Policy Research Incorporated have produced a report that explores the potential of an investment in adult literacy to simultaneously raise Canadians earnings and reduce government expenditures on Employment Insurance, Workers Compensation and Social Assistance benefits. This summary presents highlights from the main report and key findings for Canada.

### Summary: Purpose of the report

The research literature suggests that a literacy investment would precipitate economic benefits for *three* constituencies.

**Individuals** receiving skill upgrading stand to:

- ▶ Increase their market earnings,
- ▶ Reduce the burden of unemployment and illness on their quality of life,
- ▶ Reduce their need for, and dependence upon, the Employment Insurance, Workers Compensation and Social Assistance systems for income support.

**Employers** stand to gain:

- ▶ Access to a more productive, globally competitive workforce,
- ▶ Access to a larger pool of skilled workers from which to recruit,
- ▶ Fewer days lost to workplace illness or accident,
- ▶ The possibility of reduced premiums for Employment Insurance and Workers Compensation systems and lower taxes to support the Social Assistance system.

**Federal and Provincial/Territorial governments** stand to gain from:

- ▶ A more productive and participatory citizenry,
- ▶ Reduced income support payments,
- ▶ Reductions in premium and program costs to support the Employment Insurance, Workers Compensation and Social Assistance systems.

Overall, increased literacy skills would create a healthier, wealthier, more engaged and more equitable society.

### Summary: Methodology

The analysis is based upon statistically matched data from the 2003 International Adult Literacy and Skills Survey and the 2005 to 2009 Surveys of Labour and Income Dynamics. The analysis examined the costs and savings associated with moving every Canadian with a Level 1 or 2 rank on the international scale of literacy achievement to Level 3. Research suggests that Level 3 proficiency is needed for Canada to compete on global markets. The methods provide a mechanism to explore the relationships between benefit receipt and literacy skill.

### Summary: Highlights of Findings

The analysis establishes several facts:

- ▶ There is a strong relationship between receipt of benefits and literacy skills. A large body of research suggests that these relationships are causal. Determining whether a relationship is causal is important to be able to establish what expected benefits and rates of return associated with a given investment in literacy would be.
- ▶ Assuming “best practice” instruction, a one-time investment of \$1.032 billion over 5 years would be required to raise the skills of all adults in Canada to Level 3.

- ▶ Applying the relationships between earnings and literacy skills yield estimates of the implied increases in earnings that would be associated with an investment that increased literacy skill.

If that \$1.032 billion investment were made, earnings for New Brunswick adults who receive literacy upgrading are estimated to rise by \$2.79 billion, or an average of \$4,589/worker annually.

- ▶ Nationally, for each additional point of literacy increase, Employment Insurance expenditures would be reduced by \$0.61, Social Assistance expenditures by \$3.85 and Workers Compensation expenditures by \$0.90. Assuming the \$1.032 billion investment were made in New Brunswick, total savings of \$95 million could be realized in New Brunswick: \$11 million in Employment Insurance, \$16 million on Workers Compensation, and \$68 million on Social Assistance.

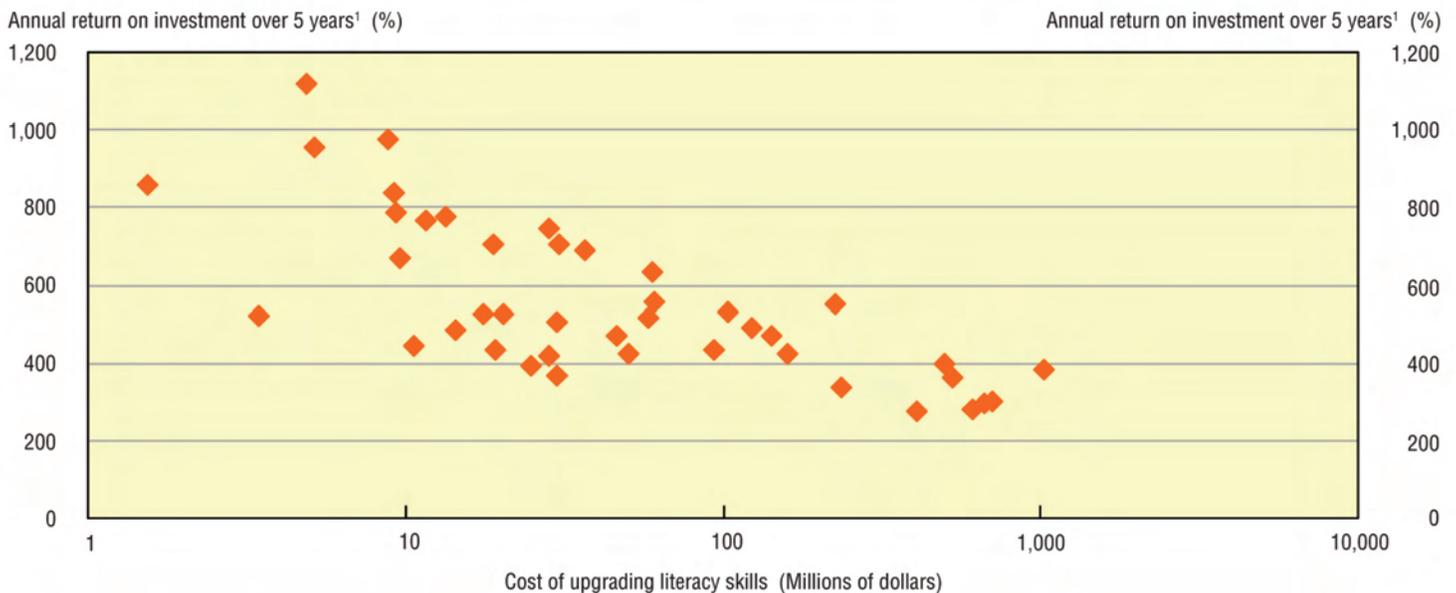
The estimates of potential earnings increases and Employment Insurance, Social Assistance and Workers Compensation savings imply significant rates of return on investment even under the most conservative assumptions. The analysis suggests:

An annual rate of return of 1264% in New Brunswick under the assumption that the benefits of higher skills only last for 5 years. An estimated annual fiscal rate of return of 381% for governments in Canada from additional tax revenue and program saving.

These estimated rates of return exclude the value of reduced health costs and other benefits, including the benefits of having a more equitable society, improvements in the quality of life and the significant increase in GDP and productivity growth rates that would result from increasing the skill levels of all Canadians to a minimum of Level 3.

Figure 1

Annual return on investment for New Brunswick by cost of upgrading literacy, selected groups



1. Return includes 33% of earnings.

Source: 2003 IALSS and 2005 to 2009 SLID.

Returns on investment vary by demographic group, industry and occupation. Investments would best be targeted on those sectors yielding the highest rates of return. In general, rates of return fall with rising investment size. The following chart and associated table identifies where skill investments would yield the highest returns in New Brunswick. The most

important conclusion is that the top 50% of investments yield strong positive returns. Investments in New Brunswick workers in Natural and Applied Science occupations would yield the highest annual rate of return, 1,121%.

**Investment yielding the highest rates of return on investment  
All ages, New Brunswick**

Sum of return on investment over 5 years <sup>1</sup>		Return on investment-quartile			
Cost order of magnitude	Cost		Quartile 1	Quartile 2	
Millions of dollars	Millions of dollars	Label	Percent		
<b>0 to 9</b>	10	Information, culture and recreation	n/a	671	
	9	Graduate degree	788	n/a	
	9	Public administration	837	n/a	
	9	Occupations in social science, education, government and related occupations	973	n/a	
	3	Utilities	n/a	521	
	5	Natural and applied science	1,121	n/a	
	5	Professional, science and technical services	957	n/a	
	2	Occupations in art, culture, recreation and sport	857	n/a	
	<b>10 to 99</b>	20	Business, building and other support services	n/a	528
		30	Bachelors degree	706	n/a
30		Accommodation and food services	n/a	503	
60		25 to 34	n/a	632	
61		16 to 24	n/a	558	
59		Trade	n/a	518	
19		Health occupations	703	n/a	
12		Educational services	766	n/a	
37		Health care and social assistance	n/a	690	
18		Other services	n/a	525	
13		Management occupations	779	n/a	
28		Business, finance and administrative occupations	745	n/a	
<b>100 to 999</b>	226	Some post-secondary education	n/a	554	
	103	Sales and services occupations	n/a	533	

1. Return includes 33% of earnings.

Source: 2003 IALSS and 2005 to 2009 SLID.

The report’s conclusions depend upon the reasonable, but unproven, assumption that literacy skill is a fundamental determinant of benefit receipt, employment and of long term rates of GDP and labour productivity growth. Assuming this to be true the estimated rates of return are high enough to warrant further research.

For a copy of the full report please visit

[www.literacy.ca/research-and-resources](http://www.literacy.ca/research-and-resources)  
or [www.dataangel.ca](http://www.dataangel.ca)

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