The 2010 Composite Learning Index

Five Years of Measuring Canada’s Progress in Lifelong Learning
Lifelong Learning

• Learning is essential to the economic and social well-being of Canadians.

• The Composite Learning Index (CLI) shows the big picture of lifelong learning in Canada.

• Until the CLI, there has been no way of measuring how well communities in Canada are doing across the full spectrum of learning.
# The Four Pillars of Lifelong Learning

<table>
<thead>
<tr>
<th>LEARNING TO KNOW</th>
<th>Involves the development of knowledge and skills that are needed to function in the world. These skills include literacy, numeracy and critical thinking.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING TO DO</td>
<td>Involves the acquisition of skills that are often linked to occupational success, such as computer training, managerial training and apprenticeships.</td>
</tr>
<tr>
<td>LEARNING TO LIVE TOGETHER</td>
<td>Involves the development of social skills and values such as respect and concern for others, social and inter-personal skills and an appreciation of the diversity of Canadians.</td>
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<tr>
<td>LEARNING TO BE</td>
<td>Involves activities that foster personal development (body, mind and spirit) and contribute to creativity, personal discovery and an appreciation of the inherent value provided by these pursuits.</td>
</tr>
</tbody>
</table>

* Inspired by the Four Pillars of Learning developed for UNESCO by Jacques Delors.*
The Four Pillars of Lifelong Learning

Learning within the formal education system (pre-school, school, university ...)

Vocational, job-related learning

Learning for social cohesion

Learning as personal growth

to know

to do

to live together

to be
Why Canada needs a Learning Index?

• **Gives attention to the important contribution of learning to Canada’s economic and social well-being.**

• **Draws attention to the multi-dimensional character of learning.**

• **Shows that learning conditions and their impact on Canada’s economic and social well-being can be measured over time and in different geographic contexts.**
How does Canada’s CLI work?

• The CLI combines a variety of indicators for each of the four pillars of learning to produce an overall score:
  – The CLI includes 17 indicators and 26 specific measures to assess the state of lifelong learning in Canada.

• Data for the indicators has to be:
  – Pan-Canadian
  – Available at the regional/provincial level
  – Reliable
  – Collected on a regular basis
International validation of the CLI

"Our Composite Indicators team at the Joint Research Centre has reviewed the Index and has found it to be internally sound and robust when tested against alternative methodological scenarios.

We believe that CCL’s Composite Learning Index is a valid measure that Canadian citizens can relate to and identify with.”

— Andrea Saltelli, Head of Unit, Econometrics and Applied Statistics, Joint Research Centre, European Commission
Inspiring International work

“CCL's Composite Learning Index has impressively shown what can be done to measure a multidimensional and not directly observable concept such as lifelong learning...

...The framework has been the inspiration for our European Lifelong Learning Indicators (ELLI) project, an equivalent indicator model for measuring lifelong learning across Europe.”

—Dr. Jörg Dräger, Member of the Executive Board, Bertelsmann Stiftung
What does the CLI represent?

• The CLI generates numeric scores representing the state of lifelong learning in Canada and its many cities, towns and rural communities.

• A high score means that a particular community has the learning conditions needed to succeed economically and socially.
Learning to KNOW Indicators

- Youth literacy skills (reading, math, science and problem solving)
- High-school dropout rate
- Post-secondary participation
- University attainment
- Access to learning institutions (elementary & secondary schools, colleges, universities)
Learning to DO Indicators

- Availability of training in the workplace
- Adult participation in job-related training
- Access to vocational training institutions
Learning to LIVE TOGETHER Indicators

- Participation in social clubs and organizations
- Volunteering
- Learning from other cultures
- Access to community services (e.g. libraries)
Learning to BE Indicators

- Exposure to media (reading material, internet)
- Learning through culture (live arts, museums)
- Learning through sports
- Access to broadband internet
- Access to cultural resources (e.g. art galleries)
Statistical Model of the CLI

Composite Learning Index

的关系 between learning and well-being

Social and Economic Index

Social Outcomes (5)

Economic Outcomes (2)

Factor Analysis (transforms)

Multiple Linear Regression (predicts)

Factor Analysis (finds commonality)

Learning to Know Indicators (5)

Learning to Do Indicators (3)

Learning to Live Together Indicators (4)

Learning to Be Indicators (5)

Measures (9)

Measures (4)

Measures (6)

Measures (7)
Social and Economic Outcomes of Learning

Economic outcomes
- Average Income
- Unemployment rate

Social outcomes
- Adult Literacy
- Civic engagement
- Early Childhood Development
- Population health
- Environmental responsibility
Assigning weights to measures

There are three common approaches used when assigning weights within a composite index.

1. Equal weights—provides each measure with the same degree of importance to learning.
2. Expert panel-based weights—allows a panel of experts to determine the importance of each measure.
3. Statistical-based weighting—allows the statistical relationships between two phenomena to determine the importance of each measure.

The CLI approach is entirely based on statistical analysis—the only objective way of determining the weights for each measure.
What communities are not included in the CLI?

• Due to insufficient data, the CLI could not be estimated for Canada’s three Territories (0.3% of Canada’s population).

• Data limitations also mean that Indigenous people living on traditional territories are not represented in the CLI (0.9% of Canada’s population).
Modest Progress in Learning over Five Years

• The 2010 CLI marks the fifth iteration of the CLI and the first for which CCL can measure five-year trends.
• Since 2006, Canada has witnessed no substantial progress in lifelong learning.
Regional Variations

- Progress varies across regions and communities.
- The majority (60%) of communities in Atlantic Canada have seen progress in their five-year trends.

![Graph showing regional variations in 5-year EPPY trend]
Note:
Though more than 98% of Canada's population is represented in the 2010 CLI, there are some communities for which there is insufficient information to calculate a CLI score. These communities are represented in grey on the map.
Varying progress by learning pillar

CLI results by pillar, 2006-2010

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>CLI Score</td>
<td>75 (+0.3)</td>
<td>75</td>
<td>77</td>
<td>76</td>
<td>73</td>
</tr>
<tr>
<td>(5-Yr EPPY)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning to KNOW</td>
<td>5.0 (0.0)</td>
<td>5.0</td>
<td>5.0</td>
<td>5.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Learning to DO</td>
<td>6.1 (+0.3)</td>
<td>5.9</td>
<td>5.3</td>
<td>5.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Learning to LIVE</td>
<td>4.7 (-0.1)</td>
<td>4.7</td>
<td>4.8</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Learning to BE</td>
<td>5.1 (0.0)</td>
<td>5.0</td>
<td>5.6</td>
<td>5.4</td>
<td>5.0</td>
</tr>
</tbody>
</table>

*EPPY = estimated points per year. This trend value is calculated using the CLI and pillar scores from the last five years.
What's driving change in each learning pillar?

Learning to KNOW
No progress
• Consistent improvement in university graduates.

Learning to DO
Consistent improvement
• Increase in job-related training.
• Increase in availability of workplace training

Learning to LIVE TOGETHER
Slight decline
• Decrease in interaction with other cultures.

Learning to BE
No Progress
• Decrease in learning from the arts.
• Increase in learning through the internet.
Learning Status for Major Cities and Towns

1. Leading Communities
2. High Achievers, with some trouble
3. Communities Rising
4. Slipping Scores
5. Making Strides
6. Communities at-risk
Interactive Features

CLI Scores 2010
4,500 cities communities across Canada
• Get CLI results and profile for your community.
• See the CLI scores displayed on the map of Canada.
• Compare scores and trends to similar communities across Canada.
• See who the top performers and most improved communities are in Canada.

CLI Case Studies
An in-depth look at some of the stories behind the statistics
From Victoria’s record-breaking 2010 CLI score to the role the performing arts scene played in Halifax’s strong showing, the results in this year’s Composite Learning Index definitely warrant closer inspection. Our 2010 CLI Case Studies examines three outstanding communities from across Canada and casts much-needed light—and insight—on some of the stories behind the statistics.

CLI and the economy
Explore the relationship with our CLI motion charts
CCL has started to explore the relationship between learning and the economy over time and across Canada. To illustrate the relationship, CCL has developed online motion charts.

The two interactive graphs (one for cities and one for economic regions) provide users with the ability to explore the interactions between CLI results, economic indicators, population and geographic location, as well as the industrial profile of a community.

CLI Simulator
Create a new CLI scorecard
Discover how the CLI works using the CLI Simulator.
With this online program, you can move sliders to increase or decrease a city’s performance in 10 different areas of learning and discover the impact on the overall pillar and CLI scores.
Canada’s score on annual learning index stalls

May 20, 2010—Canada’s progress on the Composite Learning Index (CLI) is at a stand still in 2010, and there has only been marginal progress over the past five years, according to the latest results from the Canadian Council on Learning’s annual measure of lifelong learning. The national CLI average for 2010 is 75; the same as it was in 2009. Read full news release.

Welcome to the CLI
Explore CLI scores and trends for major Canadian cities on the left, or to find CLI scores and trends for your community use the search field on the above right.
CLI Website - www.cli-ica.ca
CLI Simulator

The 2007 Composite Learning Index

OTTAWA
CLI Score (current): 56.6
CLI Score (adjusted): 58.8

Communities Closely Matched:
Top 10 Cities

Did You Know?
Liking your high school dropout rate is a good way to boost a community’s educational ratings, but studies have repeatedly shown that kids don’t like school.

Learning to Know
Student odds: 100
Attendance in formal education: 74
Access to learning: 86

Learning to Do
Job-related training: 30
Access to vocational training: 74

Learning to Live Together
Community involvement: 67
Citizen engagement: 67
Access to community services: 81

Learning to Be
Use of cultural resources: 74
Access to cultural resources: 74

Please Note: Sliders above listed are percentile values, ranging from 0 (lowest in Canada) to 100 (highest in Canada).
CLI Motion Charts
How is the CLI being used?

Nationally

• The CLI provides evidence that investments in lifelong learning put individuals and communities on the right track for the future.

Regionally

• The CLI supports regional decision makers to develop effective learning policies that support economic development, civic engagement and social equity.
How is the CLI being used?

Locally

• CLI is a measurement tool designed to help communities identify their strengths and weaknesses in fostering a lifelong learning environment.

• CLI provides a lifelong learning framework for cities to help define what a “Learning City” is and to measure progress over time.

• CLI is assisting cities in developing a “Community Learning Strategy”
Replicating the CLI Internationally

• Since 2008, CCL has supported a German charitable foundation to replicate the CLI to measure lifelong learning across Europe.
• The foundation initiated a feasibility study to examine the development of a European index based on the CLI.
• Among many findings, the study found:

“Developing a European index similar to the CLI is in our view desirable, as it would contribute to more effective and efficient education systems. Moreover, the CLI considers several formal, informal and non-formal dimensions, relates to lifelong learning, and consists of objective and comparable indicators.”
2010 ELLI Results

- In August 2010, the European Lifelong Learning Indicators (ELLI) Index was released.
- Like the CLI, ELLI is organized by the four pillars of learning to generate scores for 23 European countries.
- ELLI includes 17 indicators and 36 specific measures.

*The original dataset includes the EU 27 countries. Due to the lack of data, Ireland, Cyprus, Lithuania and Malta were excluded from the dataset.

Source: Bertelsmann Stiftung
ELLII and Global Competitiveness Index
ELL and Consumer Health Index

![Graph showing the relationship between ELL and Consumer Health Index for various countries.](image-url)
ELL and Corruption Index

![Graph showing the relationship between ELLI and Corruption Index for various countries. The graph plots ELLI on the x-axis and Corruption Index on the y-axis. Countries are represented by markers on the graph.](image-url)
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