

Canadian Manufacturing Network

# Workplace Literacy and Essential Skills Research

Soprema  
Basic Training



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## Executive Summary

### Soprema: Basic Training

Soprema Inc. is an international manufacturer specializing in the development and production of waterproofing products for the building and civil engineering sectors. Founded in 1908, Soprema has its headquarters in Strasbourg, France and operates in 90 countries. The North America headquarters is located in Drummondville, Québec and has 256 employees, for a total of 452 in Canada. Since starting operations in Canada in 1978, Soprema has manufactured and installed millions of square metres of waterproofing membranes.

The Soprema Basic Training program was provided to expand the skills of production employees (forklift operators and labourers) to enhance their advancement opportunities within the company. The goals for the employees consisted of completion of secondary-level certification and enhancing general literacy, including a better understanding of workplace mathematical data. Another training goal was to enhance participants'. A key organizational goal was to increase production quality and reduce error through improved workers' improved rapid-calculations skills.

A very small number of people (three) participated in the training – too few to permit the creation of meaningful tables and indices.

The findings suggest that the training program somewhat enhanced participants' capability. Self assessments by participants suggest some gains in learning, and high levels of confidence, motivation and perceived value. Participants reported that they had done some planning to apply their learning to the workplace.

Training did not deliver a consistent result in terms of learning and performance improvement. However, almost all participants and all managers perceived a high value in the training investment.

Although small response numbers from the Soprema data preclude a quantitative assessment of worth, it is nevertheless still useful to offer qualitative assessments of the program's value to Soprema from the perspective of senior management. In the view of senior stakeholders, the training investment was successful in achieving several key objectives that follow from the program's original rationale. Key among those objectives was the goal of providing production workers (forklift operators and labourers) with opportunities to complete their formal education and advance within the company.

The training also increased pride and self-esteem among employees, which has had a positive effect on the work environment. According to one supervisor, "We have seen the impact of the training in the growth of self-esteem of the participants—in their pride at completing the program and finally obtaining their high school equivalence certification. This pride translates into a positive force in the working environment. It encourages employee peer support within production teams."



## Case Study

### Soprema Basic Training

By Canadian Manufacturing Network with research contributed by Lynette Gillis Ph.D. & Allan Bailey, Centre for Learning Impact

### Study Background

**Overview of Soprema** Soprema Inc. is an international manufacturer specializing in the development and production of waterproofing products for the building and civil engineering sectors. Founded in 1908, Soprema has its headquarters in Strasbourg, France and operates in 90 countries. The North America headquarters is located in Drummondville, Québec and has 256 employees, for a total of 452 in Canada. Since starting operations in Canada in 1978, Soprema has manufactured and installed millions of square metres of waterproofing membranes.

**Training Rationale** The Soprema Basic Training program was provided to expand the skills of Soprema production employees (forklift operators and labourers) in order to enhance their advancement opportunities within the company. The goal consisted of preparing participants toward earning a High School certificate equivalence, including a better understanding of mathematical data in their work. The training project was made possible with funding from the Commission des partenaires du marché du travail (Québec Government). Another goal was increasing participants' self-esteem through pride in having completed the training. The present case study was designed to monitor how the training improved motivation and confidence of the participants as well as their ability to efficiently perform rapid calculations -- in particular, percentages, means and averages, as well as making use of the Rule of Three.

**The Training** Three operators voluntarily participated in the training with the purposes of earning a High School certificate equivalence and improving literacy.

Training methods included lectures, discussion groups among the participants, and individual and group exercises.

The skills focus for the case study was on calculation and basic mathematics. Learning objectives of the training were:

1. Good command of mathematical operations including addition, subtraction, multiplication and division for work and other daily purposes.
2. Ability to calculate percentages for work and other daily purposes.
3. Ability to calculate and transform operations including fractions and decimal numbers for work and other daily purposes.
4. Ability to calculate averages and means as well as make sense of such numbers for work and other daily purposes.
5. Ability to solve mathematical problems and apply the Rule of Three.
6. Perform rapid mental calculations (addition, subtraction, multiplication, division, percentages, means and averages).

## Methodology: High Impact Evaluation

### The Case Study Methodology **The Learning Value Chain™**

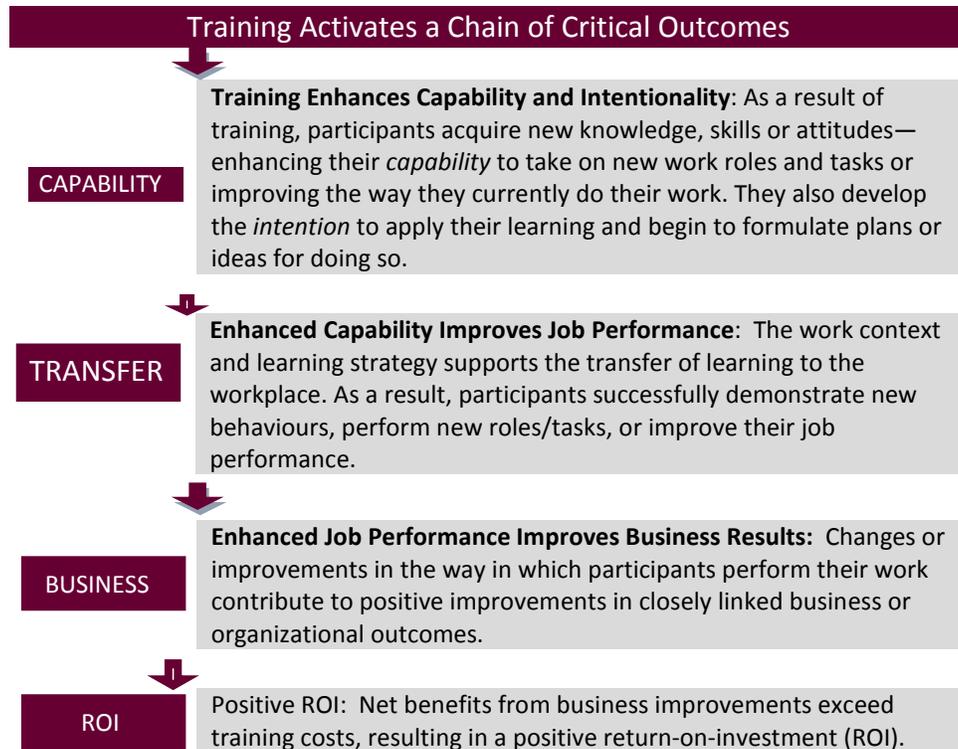
The Soprema case study adopts the Learning Value Chain evaluation approach—the core evaluation framework and instrument-set developed for the Gillis and Bailey High Impact Evaluation model. The Learning Value Chain™ framework offers an uncomplicated, field-tested framework for evaluating the learning effectiveness and the business value of training and human resource investments (Figure 1).

In the Learning Value Chain™, the training program triggers a chain of critical outcomes. Monitoring this chain of outcomes adds an innovative and critically important predictive value to the evaluation process. As desired outcomes are achieved at each link along the chain, greater value is added and the likelihood increases that training will result in positive business outcomes and return on investment. Conversely, if training fails to meet outcomes at any link, value is diminished and the prospect of positive business results and return on investment is at risk.

Using the Learning Value Chain™ framework, the training program is evaluated at each of four links (Capability, Transfer, Business Results and ROI). At each link, data is gathered to assess the extent to which the training has achieved key outcomes, added value and enabled the next critical event in the chain to occur.

The Learning Value Chain™ model also incorporates a diagnostic strategy to investigate training practices and strategies that may strengthen or weaken outcomes at each link and subsequently influence business impact and return on investment.

**Figure 1**  
The Learning Value Chain™



## Capability Results

**Evaluation Questions:** Did training participants develop new *capability*: acquire new knowledge and skills, adopt new attitudes, improve existing skills, or discover new and more productive ways of doing work? Did participants also develop the *intention* to apply their learning or improve their job performance?

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### Training moderately enhanced learning and had a high impact on other Capability indicators such as Confidence, Motivation and Perceived Value

To assess Capability—the first link in the Learning Value Chain™ — course participants were asked to complete the Capability Questionnaire at the conclusion of the training program.

A very small number of people (three) participated in the training – too few to create tables and indices. The findings do suggest that the training program somewhat enhanced participants' capability. Self assessments by participants suggest some gains in learning, and high levels of confidence, motivation and perceived value. Participants reported that they had done some planning to apply their learning to the workplace.

#### Key questionnaire results are described below.

- **Skills & Knowledge:** Before training, the training participants rate their knowledge and skill level as “moderate” to “high”. After training, all participants rate their knowledge and skill level as “high”.
- **Confidence in Applying Learning:** The participants reported a range of confidence in their ability to effectively apply their learning to their jobs, from “low” to “moderate” to “high”.
- **Perceived Value:** All participants perceived the program's value as "high" (i.e., credible, practical, relevant, and essential).
- **Motivation to Apply Learning:** All learners report that they are "highly" motivated to apply their learning.
- **Plans for Action:** All participants report having plans or ideas for learning application.

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### Important Caution:

The data for the Soprema case study is based on a very small sample: three employees participated in the training and responded to the questions on the Capability and Transfer Questionnaires. Given the small sample of learners, the results should be treated as 'suggestive' of the training's impact and not generalized to other training audiences.

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### Effective Practices

The following practices were identified by participants as having contributed positively to the learning:

- Information sessions for participants
- Tools, materials and methodologies used for training
- Provision of a schedule of activities and details about the program

- Preparatory work assigned before the training
- The training program
- Group discussions during the training
- Time allotted to participate in the training during work hours
- Having a dedicated room for training

**The participants also rated the instruction as "effective" in all the following regards:**

- Clearly communicating the learning and performance objectives
- Engaging and sustaining learners' interest
- Providing realistic and work-related practice activities
- Eliciting learners' prior knowledge or experience in related areas
- Presenting key concepts clearly and logically
- Providing useful feedback during activities
- Providing opportunity for collaboration, discussion, and learning from others
- Providing opportunity for learning assessment or reflection

## Transfer Results

**Evaluation Questions:** Did the work environment and learning strategy support the transfer of learning to the job? Did training participants apply their learning to their jobs, and did the application of learning impact their work or job performance?

**Training did not deliver a consistent result in terms of participant learning and performance improvement.**

**However, almost all participants and all managers perceived a high value in the training investment.**

To assess Transfer—the second link in the Learning Value Chain™—participants in the mathematics training program were asked to complete Transfer Questionnaire (TQ) approximately two months following training.

**The findings suggest that there was a wide range in perceived transfer of the learning to the job.**

- **Learning Application:** One participant reported a “low” degree of learning application, another participant reported a “moderate” application, and the third reported a “high” degree of learning application to their job. However, managers reported that participants primarily demonstrated “high” application of learning to the job.
- **Performance Improvement:** One participant reported a “low” degree of performance improvement, another participant reported a “moderate” degree, and the third reported a “high” degree of performance improvement in their job. However, as before, managers reported a consistently “high” degree of performance improvement.
- **Organizational Results:** Two of the three participants perceived a “high” level of improvement in work efficiency. Two of the three

reported a “low” level of improvement in product quality/error reduction. Improvements in communication and morale were reported as “low” by two of the three participants. All three managers reported a “high” degree of improvement in all organizational results.

- **Perceived Value:** Two of the three participants reported a “high” level of agreement that the training was a good investment, and all three managers reported that the training was a 'worthwhile investment for Soprema.'

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### Effective Practices Enabling Transfer

The following strategies and practices were identified by two out of the three participants as having contributed to the training event’s success:

- Support of colleagues or peers
- Information, reference materials, tools, or job aids

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### Barriers to Transfer

One participant perceived there was a lack of information, reference materials, tools, or job aids provided.

## Organizational Results & ROI

**Evaluation Questions:** Did the application of learning or improvements to job performance impact business results? What were the intangible benefits from the training?

As previously pointed out, the small number of respondents makes it difficult to draw valid or even meaningful conclusions about the impact of the training on business results and return on training investment.

At the end of the day, however, the goal of this study series is to identify, measure, and finally share the value that training investment delivers to the organization and its employees. In the main, the series has been carefully designed to provide a credible base of evidence to help other Canadian SMEs appreciate the real value of investing in Essential Skills training.

Although small response numbers from the Soprema data precludes a quantitative assessment of worth, it is nevertheless still useful to offer qualitative assessments of the programs value to Soprema from the perspective of senior management.

In the view of senior stakeholders, the training investment was successful in achieving several key objectives that follow from the program’s original rationale. Key among those objectives was the goal of providing production workers (forklift operators and labourers) with opportunities to complete their formal education and advance within the company.

The success of these overarching goals are confirmed anecdotally by senior managers. According to Louis-David Lemaire, Soprema’s

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Director of Plants, "The aim of the training was to stimulate interest in lifelong learning in our employees as well as promoting better performance in our organization. This program could easily lead to career progression in our growing company."

Mr. Lemaire states that the training gave Soprema the opportunity to help employees further their own education: "We are proud to provide the learning environment and the time for those of our employees who wish to complete their high school equivalence."

According to supervisor, Kevin Lessard, the Soprema Basic Training has also yielded substantial, positive changes in Soprema's workplace environment and in employee attitudes: "We have seen the impact of the training with the pride and self-esteem of the participants to complete the program and obtain their high school equivalence certification. This pride is also a positive factor in the working environment and encourages employee peer support within production teams."