



Case Study May 2002

Excellence in Workplace Literacy, Small Business Winner, 2001 Diversified Metal Engineering Ltd.

OVERVIEW

Most of Diversified Metal Engineering Ltd.'s (DME) products serve the food and beverage industry. One of the company's most important products involves equipment for the brewing industry – stainless steel tanks with brass trim that range in size from five-barrel brewpubs to 60-barrel regional brewing systems. The emphasis is on quality – in equipment, in service and in long-term customer support.

Because DME's products are diverse in nature and its global markets are subject to constant change, the company requires a flexible, specialized, knowledgeable workforce. Having well-trained staff is a key component of DME's manufacturing of quality products. As such, DME feels that providing continuous learning opportunities for the entire staff is crucial to its ongoing competitiveness. In collaboration with a provincial workplace

education program, Workplace Education PEI, a project team guides DME's learning initiatives, including needs assessments and several programs.

This program was selected for an award because of the company's willingness to take risks with training, which ultimately led to an improved bottom line and a

Effective practices in providing training and supporting workplace learning.

A core product of the National Business and Education Centre

Name of Program
Workplace Adult Education

Program
Workplace

Date Established
1998

Skills Developed
Fundamental
Personal Management
Teamwork

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happier, more collaborative workforce. This program can serve as a model for many small and medium sized companies.

OBJECTIVES

Initially, management had two main objectives for its employee training program. The first addressed bottom-line benefits of cutting costs in production, as well as production time. The second was to build the confidence and general knowledge of business operations on the part of employees. Other goals for training included providing access to continuous learning opportunities and improving employability skills, leading to greater job mobility and/or job security for employees.

TARGET GROUPS

Shop floor workers were offered the first round of training at DME. After administrative staff saw the shop floor workers receiving instruction, they, too, requested training. The company responded positively to this group, since its policy was to not exclude any employee from receiving training. Management and the training instructor consulted the administrative staff to find out what kind of training they wanted to have. Together, they chose office communications and critical thinking/problem solving as the focus of training.

ACTIVITIES

In the first year of the program, training for shop floor workers concentrated on upgrading their math and communications skills. The workers also requested specific instruction about meeting facilitation and conduct, in order to better organize their association meetings.

In the first training session for shop floor workers:

- Employees attended one two-hour class per day, two days per week;
- Participants could choose to attend a morning or an afternoon class;
- For each class, employees donated one hour of time, and the company donated the second;
- DME's boardroom was used as the classroom;
- The shop floor was used for hands-on problem-solving; and
- Overtime arrangements were worked out amicably by both parties.

The second year of the program saw the shop floor workers progressing toward and attaining their RED SEAL national certificates for welding. The RED SEAL certification would qualify an employee to be hired in other provinces without being retested for welding competency.

Administrative staff were offered training in office communications and problem-solving. In this second year session:

- Training focused on communications and inter-personal skills, such as taking messages, conducting meetings and giving praise or criticism; and
- Instruction raised participants' awareness of how and why things are done, and showed them the logic of systems and how to apply this logic to their job tasks.

RESOURCES

Management at DME felt that, while providing company time and resources for training was expensive, it was a worthwhile investment in its workforce. DME's support for the training initiative took the form of release time, in-kind services and financial commitment.

DME also made use of the local Industrial Park Workplace Centre for its training initiative. The benefits of tapping into this resource were quickly realized:

- Provided and supported by Workplace Education PEI;
- Used by local companies;
- Open in the evenings; and
- Computers were made available for introductory computer literacy instruction.

In addition, Workplace Education PEI is able to fund workplace education programs for up to three years, on a sliding scale. The employer is expected to gradually assume financial responsibility for a new training program. Workplace Education PEI also provides employers with a shortlist of trainers, makes presentations, and provides the space for the Learning Centre in the local industrial park.

INNOVATIONS

DME incorporated the following innovations in its support of employee training:

1. The use of the boardroom as the classroom emphasized the value that management placed on the employees and their training.

2. Program delivery used a multi-media approach, with films and computers, as well as hands-on work with metric measurement tools.
3. Participants and the training project team were encouraged to take ownership and make joint decisions about the program.
4. Allowing the participants to have a say in selecting the instructor enhanced their acceptance of the program.

BARRIERS

Despite management support, there were challenges in putting the training program into place at DME:

- Some workers were reluctant to participate and had an “I don’t need this” attitude;
- Production schedules were difficult to maintain while workers took time off for training;
- The costs of providing company time and resources for training was high;
- The specialized nature of work at DME is not easily understood by outside instructors, making development of customized course materials a challenge; and
- Designing and delivering training to participants with a wide range of ages, education levels and experience (the age of participants ranged from 20 to 50).

SOLUTIONS/KEYS TO SUCCESS

DME found a number of solutions to the challenges of providing its employees with training. Creating employee buy-in, providing a customized curriculum, and supporting the learning at all levels proved to be the keys to the learning program’s success.

Employee buy-in was created, in part, by maintaining participant confidentiality:

- The instructor reported back to the company on attendance only; and
- The instructor was an external consultant who had no vested interest in reporting grades to the company.

Customizing the curriculum to meet each student’s needs was achieved through carefully matching the instructor to the participant. Management and potential students interviewed several potential training instructors.

The training instructor was hands-on and enthusiastic. He began by asking the workers what they wanted

to learn. He asked them about their jobs and tasks, and even asked them to teach him how to weld. The instructor also encouraged the participants to be proactive in their working environment. Their self-confidence increased and they were able to ask more questions about their jobs and workplace. Real workplace documents and situations were used to create teaching materials.

The learning program was supported at all levels, as was evident in:

- The level of patience and understanding shown by the Shop Foreman, who had to make sure that production schedules were maintained, no matter how many employees were on the shop floor;
- Overtime arrangements worked out cordially by all parties;
- Partial funding, classroom space, release time and resource materials provided by management; and
- The instructor and other costs funded by Workplace Education PEI.

OUTCOMES

A number of outcomes, both anticipated and unexpected, resulted from the training initiatives at DME.

In the first year training program for shop floor workers, they were:

Anticipated outcomes:

- The trainer learned about meeting facilitation, then passed on this knowledge to the class; and
- Mock meetings were held in class.

Unexpected outcome:

- During workplace meetings, participants corrected or trained those who had not taken part in the training.

In the second year of the training,

Anticipated outcome:

- 70 per cent achieved a passing grade for the RED SEAL national welding certificate (average passing rate is 30 per cent), with several others completing it later, on their own time.

Unexpected outcome:

- Within one year, the number of RED SEAL certified welders on the shop floor had doubled.

Overall, as a result of the training initiatives:

Anticipated outcomes:

- A positive attitude towards learning spread throughout the company;
- Materials used in production decreased; and
- Employees now work 'smarter', using more logical thinking.

Unexpected outcomes:

- Barriers between 'shop floor' workers and 'admin' staff decreased; and
- Shop floor workers shared ideas and solved problems together on the shop floor.

IMPACTS AND BENEFITS

These training initiatives had a positive impact on the company's operations and the degree of teamwork present, as well as benefiting the individuals who participated. Process changes were observed before and after training, primarily by shop floor supervisors, but also by co-workers and management.

OPERATIONAL BENEFITS:

- Decreased time and waste;
- Increased production;
- Less duplication of work;
- More logical thinking - a better understanding of why and how things are done;
- Listening skills improved;
- Improved ability of employees to express themselves clearly; and
- Lower staff turnover.

TEAMWORK BENEFITS:

- Improved communication on the shop floor;
- Initial training gave participants confidence to try new things;
- Workers began helping other training participants on the shop floor;
- Work teams became more integrated and willing to help each other when needed;
- Transfer of learning between training participants and other workers; and

- Training broke down barriers between management and workers, with the President's involvement and encouragement of the participants.

INDIVIDUAL BENEFITS:

- Increased participant self-confidence;
- Learners gained a sense of empowerment;
- Participants were able to help their children with homework;
- Positive change of attitude, with learners wanting to solve problems;
- Learners became more involved in community teams and committees; and
- Training showed employees that they were a respected part of the company.

USE AS A MODEL

The model of employee training used at DME is well-suited to organizations of any size which rely on project teams. The anticipated training outcome of improved efficiencies by teams and individuals is unquestionably beneficial. However, the surprising outcomes of improved teamwork and peer training can bring long-term benefits, such as workforce flexibility and a culture of collaboration, to organizations in manufacturing and other sectors.

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Diversified Metal Engineering Ltd.
by *Alison Campbell*

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