

L & D News

2012 Year End Issue

Learning & Development Newsletter

Building a culture of learning and skill development, one step at a time.

Vale Base Metals Trainee Program ends on a high note

By Amy Yamoah, L & D, Toronto

As Vale's Base Metals Trainee Program comes to an end, we would like to take an opportunity to reflect on the positive impact the program has had on the trainees and our Canadian operations alike. The Base Metals Trainee Program was designed to prepare new engineers and geologists from Indonesia and New Caledonia for technical careers in their home locations. The program was created to address labour shortages in key skill areas in these locations and to help our trainees meet future business challenges by leveraging expertise and experience gained in the Canadian operations during the program.

Over the course of April and May, twenty-nine trainees from New Caledonia/France and Indonesia arrived in Toronto eager to learn about the Canadian operations. As part of their introduction to Vale, the trainees took part in an orientation session held at the Toronto office, which included an overview of Vale's Base Metals business, a basic understanding of Canadian culture and participation in business language training. The trainees were then deployed to their first rotational training assignment at one of the following operations: Sudbury, Port Colborne, Mississauga, St. John's and Thompson. For approximately 3.5

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If you build a better learning environment, they will come — and they will learn

By Michael Itiniant, L & D, Toronto

It can be said that the creative and targeted design of training material is the result of upfront research and a dedicated effort to get the content right. In turn, this can result in increased knowledge, skills and behavioural changes that are positive for our business. When the payoff to great training is delivering measurable results that make performance improvement contributions to our operations, investing more time at the beginning of the design process is easily the best investment for any kind of approach to training.

The upcoming Training Materials Guideline booklet, being created by the Corporate Base Metals office, has

come at the request of key stakeholders interested in maximizing learning application back on the job as well as a request for standard training material development guidelines, which are needed in all areas of our business. This document will guide training designers in the creation of engaging learning events and supplementary training materials by following a common and structured process, ensuring high levels of consistent quality. This includes guidance for materials such as:

- Power Point presentations
- Trainer guides
- Participant workbooks
- Job aids

The Training Materials Guideline will introduce the concept of minimum acceptable Valer (Vale Education) standards for learning materials being delivered to Vale employees in our region. The goal is to “raise the bar” on the quality of materials being produced to ensure that we establish critical requirements for learning material content and visual representation in all areas. Watch out for this document, which is coming soon. Your training success is our success.

See top of next page for a list of benefits from using the guide.

Value expectations of training material designers:

- Follow a systematic process to developing training materials for learning events.
- Incorporate adult-learning principles into the instructional design of learning events/materials.
- Select optimum training methods and tools to achieve the stated learning objectives.
- Involve key stakeholders in determining desired business results and providing final validation of the training materials/content of learning events.
- Include real-life circumstances and situations in the learning events to help participants retain what they have learned.

This guide will enable you, as a subject matter expert (SME) or training material developer to:

- Define the specific business results/outcomes that are expected by key stakeholders or business unit owners for the training topic;
- Describe what the learners will be able to do (and how they are meant to do it) after they attend training and go back to their workplace;
- Provide theory, activities and discussions specific to the learning-event topic to help learners achieve the business results expected;
- Design the training so that the learners are engaged (awake and interested) while ensuring that the course is relevant so that trainees are able to improve performance in their workplace;
- Assist the manager of the trainee to observe and understand how to measure the effectiveness of the learning being deployed and coach to the gaps.

Vale Base Metals Trainee Program ends on a high note (Cont'd from page 1)

months, they gained practical, hands-on experience by working under the direct supervision of our knowledgeable and highly skilled staff in the field.

During the third week in August, they all regrouped for the **Groundbreakers** interpersonal and leadership skills program held in Collingwood, Ontario. Here, they took part in a series of interactive and engaging sessions that equipped them with a set of practical tools to enhance their communication skills in order to strengthen their workplace relationships. Their second and final training rotation began with different site placements immediately after this program.

During the week of December 10, all trainees will return to Toronto for the program closing prior to returning

home. The highlight of this week will be presentations delivered by each trainee on their key learnings during the program.

Based on the feedback from the sites that have helped support this program, it would be true to say that, overall, this has been a positive experience for everyone involved. Despite some of the inevitable (minor) cultural and language barriers, the trainees have integrated well into our operations and provided valuable contributions to their assigned work teams. They have undoubtedly benefitted from this opportunity to hone their technical skills as well as interpersonal skills in preparation for their future technical roles in their respective home countries.



Although the formal trainee program is over, the practical knowledge and skills the trainees have acquired over the eight months that they have spent in Canada will certainly benefit them over the course of their careers with Vale.

We would like to thank those at each site who have supported this program throughout the year. Without your tireless efforts and commitment to the development of our overseas visitors, this initiative would not have been possible. We are all very grateful.

What's Next in Your Professional Development Plan? Part 1

By Amy Curnew, Earning Through Learning

Vale is committed to enhancing the professional capabilities of employees through readily available, cost-effective, high-quality training and educational offerings. To support this goal, Vale offers employees access to eCornell's flexible online learning opportunities. In the next several issues, we will reach out to Vale Cornell University graduates and record their professional development journey with eCornell.



The first Vale employee to share in this series is **Angelo Prato**, Senior Water Plant Operator in Sudbury, Ontario. He has an impressive transcript as a graduate of several eCornell certificates and courses including:

Certificates:

- High Performance Leadership
- Change Leadership
- Managing for Execution

Courses:

- Secrets of Phenomenal Customer Service
- Leading People to Higher Performance
- The Impact of Personality Styles on Communication
- Managing Communication Challenges

Angelo was happy to share his experiences with his fellow colleagues. Below is a Q&A about his experiences.

Why did you decide to explore professional development training with eCornell?

I continually seek out new opportunities to learn, especially with continued education credits needed to maintain our licenses. I had noticed an article in Vale News highlighting

eCornell, so I went in to see what was offered, as I love to learn and wanted something to support me with my goals. I also knew that one of my development goals was to improve my communication skills regarding how I express myself with other colleagues. I set a goal and my superintendent has coached me along the way.

What influenced you the most based on your time in the courses?

Each course has offered a key lesson that I have utilized both at work and at home. With The Impact of Personality Styles on Communication course I learned how to use the different behavioural styles with different people. I've started asking more questions and listening vs. telling people what to do. After the Managing Communication Challenges course, I copied a checklist to my desktop that helps prepare me when faced with a tough and difficult conversation. I have used it and have had positive results.

With the Negotiating Support course, I realized how important it is to get buy-in from others. I had created a Continued Education course that required support to get accredited and this course really helped me take the approach needed to get buy-in.

Though I don't have any direct reports, after taking the **Coaching Mindset** course, I appreciate the efforts my superintendent is taking to coach me along the way. It's a great course that opened my eyes to what and how my superintendent is thinking and how to develop your employees.

What would you share with others who are considering finding the time in their busy schedules to do training?

Make some goals — you need to set goals to see the opportunities that are available to you. Only by setting them will you notice the things around you that will help you get there.

Want to learn more?

Connect with your HR Business Partners to learn more about Vale's professional development opportunity. To enroll, visit:

- Supervisors, managers and staff roles:
<https://www.earningthroughlearning.com/56/Vale/>
- All employees:
https://www.earningthroughlearning.com/57/Vale_all_employee/

Voisey's Bay well on the way to meeting legislative requirements for Fall Protection and Confined Space training

By Wayne Kean, L & D, Voisey's Bay

In Newfoundland and Labrador, new Occupational Health and Safety Regulations were introduced in 2009 that had a significant impact on the business training needs in this part of Canada. As a result, all employees who are involved in fall protection or confined space activities are required to complete a mandatory training program certified by the Workplace Health, Safety and Compensation Commission (WHSCC) by December 31, 2012.

Implementation of this required training is a two-part process. Although in-house training is permitted, the first step was the development of a program that had to be submitted to the Commission for certification. For the second part, any trainers who were identified by our company to deliver this program then had to be certified by the Commission before training could begin.

At Voisey's Bay, this was achieved through the establishment of a relationship with a service provider that had previously had their program certified. Vale trainers were then certified by the Commission to deliver this existing program.

The standard for the Fall Protection and Confined Space training, as

established by the Commission, stipulated that the programs must be two-days long: one day of theory and one day of practical, hands-on training.

This meant that approximately 200 Vale and permanent contractor employees have been required to attend the two days of training for each of these programs. The need to qualify people in this program, in conjunction with other training that has to occur for the site, has put an enormous strain on business resources.

However, due to the dedication of the trainers and the support from our business, the challenge is being met. To date, 199 employees have been trained in the Fall Protection material since January 2012 and 128 in Confined Space since August 20, 2012. Classes for both programs have been scheduled until the end of the year to train the remaining employees.

It has been a tremendous team effort to be able to comply with these regulations, and a sincere thank you goes out to everyone involved.





The Transfer of Tacit Knowledge in the Workplace: Part 3

By Rodrigo Ribeiro, Production Engineering Department — Federal University of Minas Gerais, Brazil

In this issue, we continue to explore how people learn in the workplace. Professor Rodrigo Ribeiro explains how transferring what is learned by doing (tacit knowledge) and documenting this learning (explicit knowledge) is both a challenge and an opportunity when being relied upon to identify all the different circumstances a person may face in the task they are performing.

L & D News: Can we turn tacit knowledge into explicit knowledge? For instance, can we incorporate tacit knowledge inside books, manuals, operational procedures or machinery?

The answer depends on the type of tacit knowledge you are talking about. For instance, automation and mechanization are ways of transferring to machines the sensory or motor part of some of our actions. For example, an electrical ear, called a folaphone, was built to monitor changes in the material charge in a ball mill, removing the human ear method of doing the same job and transforming what a person senses (tacit) into measures on a dial (explicit). In the same way, some observed rules, or **taken for granted rules** (rules of thumb), can be written down or even incorporated in software or specialist systems. This would only work if we have in mind the building of a decision-tree that is strictly connected to rules that belong to the natural world and can account for every conceivable situation. This is what I would call **knowledge reification** (that is, the materialization of knowledge). Every time automation, mechanization or the writing up of instructions takes place, two other phenomena occur as well. What has been produced becomes dated in a very short time and is subject to what the philosopher Wittgenstein called **regress of rules**. This regress is the fact that “the rules do not contain the rules for their own application.” I will elaborate on these points.

All products of human knowledge, such as books, manuals, machines and so forth, are historically situated. Just look at the books written about the Sudbury Basin in the first half of the last century, which include all kinds of ideas about how this great ore deposit was formed. These all had believable merit until it was realized much later

on that it was the site of a large meteorite impact millions of years ago. Similarly, any workplace procedure created many years ago would make a current reader wonder what the originator was thinking when they wrote it, given the advances in safe work processes and automation. Inevitably, the clock starts ticking after these “products of knowledge” are produced and one must be able to evaluate if they are still up to date before using them later on. This is why there is a process for reviewing operating procedures when actually used or, as a minimum, on a time-duration period, although in reality, work practices usually evolve faster than the updating. This is one of the reasons books constantly call for new editions in the same way machines and software call for upgrades.

This predicament of how anything that is written down and deemed “the way it is” can become out of date and sometimes unusable in a relatively short time frame highlights the danger of thinking this will provide all the knowledge a person will need for the task they are performing. In the next edition, Rodrigo will explore this **regress of rules** phenomenon further.

For additional information on Tacit Knowledge see below.

Note from the L & D Newsletter — Three academic papers bearing on the topic of this interview have been published this year and a third one was published in 2007 in which the possibility of automating the tacit knowledge of a master baker is discussed in detail. The references of these papers can be found below. For more information on Tacit Knowledge please contact Rodrigo Ribeiro (RibeiroR@cardiff.ac.uk)

Ribeiro, R. (2012a). Tacit knowledge management. *Phenomenology and the Cognitive Sciences*. doi:10.1007/s11097-011-9251-x

Ribeiro, R. (2012b). Levels of immersion, tacit knowledge and expertise. *Phenomenology and the Cognitive Sciences*. doi:10.1007/s11097-012-9257-z

Ribeiro, R. (2012). Remarks on explicit knowledge and expertise acquisition. *Phenomenology and the Cognitive Sciences*. doi: 10.1007/s11097-012-9268-9

Ribeiro, R. and Collins, H. (2007). The Bread-making Machine: Tacit Knowledge e Two Types of Action. *Organization Studies* 28(9): 1417-1433.



Training Material Development Services

Let the Learning and Development Experts Help

As we strive to meet the Valer vision of learning excellence, Corporate Toronto's Base Metals L&D department provides training material developers with the following assistance and guidance.



Stage 1

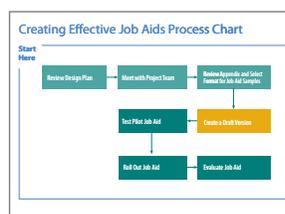
L & D department can assist you with developing engaging learning events and supporting training materials.

Stage 2

L & D department can review and provide advice on the business impact your training materials need to have to achieve your training goals.

Stage 3

L & D department can provide guidance how to effectively organize your upcoming learning events.



Job Aid Creation and Review



Create • Engage • Learn

Let us assist you with the development of all your training materials to ensure maximum business impact. To make use of our services, contact steve.ball@vale.com.

Contribute an Article

Let's all work together to make this newsletter a great success and a great communication medium in years to come. We hope you enjoy reading our newsletters, and if you have any suggestions or comments, please email them to michael.itiniant@vale.com.