

L & D News

October 2012

Learning & Development Newsletter

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

Distance Learning

By John Regimbal, L & D, Sudbury

Learning is defined as “the act, process or experience of gaining knowledge or skill.” Distance learning, in simple terms, is an instructional delivery method that connects learners with educational resources that are otherwise separated by distance and/or time.

This form of learning increases access to learning opportunities and can accommodate multiple learning styles, serving learners who are either not able or are uncomfortable attending traditional classroom instruction. In many cases, it can accommodate more learners per dollar spent, given location or travel constraints. Additionally, it provides an opportunity for less-confident or less-experienced learners to engage in a less-threatening learning setting as they interact with new content.

Several key features define distance learning:

- the separation of instructor and learner during the majority of each instructional process
- separation of instructor and learner in location and/or time
- the use of educational media to connect instructor and learner
- the provision of two-way communication between instructor and learner
- more control of the learning pace by the student rather than the instructor

These definitions apply to both high-tech and low-tech approaches to distance learning and rely on highly engaged instructors or facilitators to leverage the process, where needed, for maximum impact.

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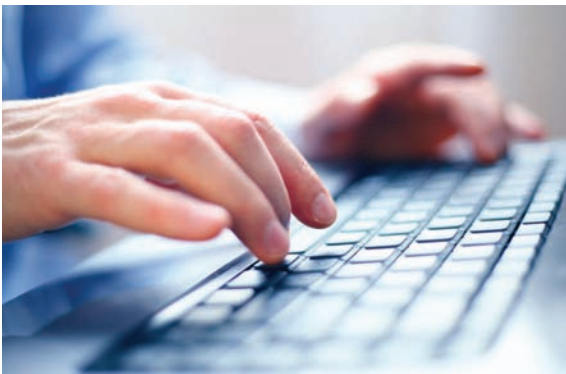
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One Vale Americas (Base Metals implementation) Project Update

By Anna Bojarska, Training Analyst — Change Management and Organizational Impacts
One Vale Americas Project — Wave 3 (Base Metals, North Atlantic)



“One Vale” is a program that will impact many areas within our company. The One Vale Americas Project is about business transformation enabling us to reliably deliver our plan, through standardization, simplification and integration.

Transforming our business processes like this is made possible through the SAP tool. SAP is an Enterprise Resource Planning tool, and the acronym stands for Systems, Applications and Processes for Data Processing. The implementation of One Vale is aligned with other strategic initiatives to achieve our objectives of excellence in operational and administrative processes.

The One Vale Americas phase is currently being implemented in the North Atlantic and Brazil. One Vale Americas will simplify the application landscape by removing over 15 legacy systems and consolidating functionality and reporting within SAP. Three of the largest legacy systems that are flagged for replacement include:

- Oracle
- Ellipse (Production/Maintenance tool)
- TINO (Marketing/Commercial tool)

One Vale Americas Wave 3, the business transformation for the North Atlantic operations (including the Base Metals Regional Marketing Units), kicked off the first of its fit gap reviews on April 30 of this year. The fit gap review is a comparison of what exists for the predesigned business processes and SAP configuration versus what will be required for the North Atlantic Base Metals business. After the successful fit gap sessions ended in early July, the implementation for the Base Metals group is now entering its design phase. A main goal of the design phase is to confirm business processes and develop a roadmap for the construction of the supporting systems during the build phase. The build phase, which consists of building the technical solution to fit our business requirements, will start in March 2013, followed by the test and deploy

phases, which will go until the end of July 2014 and have a go-live date scheduled for August 2014. The One Vale team will also continue to support the business post implementation, with some project teams remaining in place until the end of 2014.

For Wave 3 of the project, there are an estimated 6000+ end-users who will be affected by the scope of the change in business processes and systems. With this many people impacted, the training demands will be immense. My role as the Training Analyst on the Change Management team is to represent the learning and development needs by leading the end user training initiative for Wave 3. This will be done in alignment with the standards from the corporate Learning and Development (Valer)



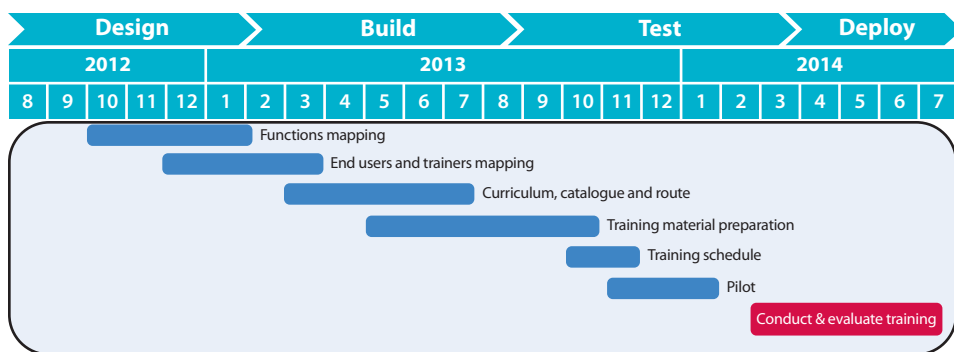
From left to right: Denis Deschamps, lead for Integrated Operations and Maintenance; Helen Francis, general manager, One Vale Wave 3 Business Lead; Alexandre Pereira, global CIO; Yvonne Belton, maintenance; John Pollesel, COO Vale Canada, Director Base Metals North Atlantic.

team and with the support of Wave 1&2 counterparts in Brazil. The training strategy will focus on ensuring that all training materials be based on predefined Valer guidelines, and internal trainers will be used when possible, with little dependency on external resources.

The experience of previous One Vale implementations in Australia, Indonesia and Peru identified that training was negatively impacted on account of the business not being fully engaged in the development and execution of training programs, having relied heavily on outside consultants to manage this process. In order to not repeat this situation in Wave 3, we are looking to the project’s functional teams and to the business for early engagement in all training initiatives as part of the training strategy.

The training timeline for Wave 3 is shown in the diagram below:

team also continues to receive support from the senior leaders of the



The business transformation that will result from this project, and the change management required to successfully implement this transformation, is tremendous. In order to ensure success, this implementation requires commitment from both the project team and the business. The project

North Atlantic business who are investing time to help support the key strategic decisions needed as the team moves further into the design phase.

Further updates from a learning and development perspective will be provided as this project progresses.

Training Aligned to Your Development Goals!

By Amy Curnew, Earning Through Learning

Our partnership with Earning Through Learning, eCornell's Canadian Affiliate, offers Vale employees a flexible learning experience that supports individual development goals.



Managerial Competencies

Business	Interpersonal & Leadership Skills
<p>Managing for Results</p> <ul style="list-style-type: none"> • HAME506 Improving Personal and Workgroup Productivity • ILRMD508 Managing People Issues to Stay Focused on Priorities • ILRMD507 The Power of Managing Your Time and Personal Priorities • CEPL552 Project Teams: Mining Collective Intelligence • CEPL553 Dealing with Difference <p>Quality</p> <ul style="list-style-type: none"> • LSM506 Executive Decision Making • ILRMD503 Overcoming Barriers to Successful Management • CEPL554 Earned Value Management • HAME507 Mastering the Time Value of Money • HAME513 Understanding Financial Statements • HAME514 Using Ratio Analysis to Evaluate Financial Performance <p>Strategic Thinking / Management</p> <ul style="list-style-type: none"> • LSM507 Leading Through Creativity • HAME511 Managing Strategic Change • LSM502 Strategic Thinking • LSM503 Scenario Planning • ILRSM513 Establishing Momentum: Managing Structure, Resources and Performance • ILRSM514 Sustaining Momentum: Motivating through Vision, Culture and Political Agility 	<p>Leadership</p> <ul style="list-style-type: none"> • LSM510 Overcoming Challenges to Leaders and Their Teams • ILRMD506 Preventing and Addressing Inappropriate Workplace Behaviours • ILRMD509 The Impact of Personality Styles on Communication • HAME504 Understanding Team Dynamics • ILRSM509 Developing an Agenda for Change • CEPL551 Introduction to Project Leadership <p>Organizational Savvy</p> <ul style="list-style-type: none"> • CEPL555 Influence Without Authority • ILRSM510 Mapping the Political Terrain of Allies and Resistors • ILRSM512 Mobilizing the Coalition for Action • ILRSM511 Negotiating Support and Buy-In for Your Agenda • ILRSM515 Preparing for Negotiation • ILRSM516 Tactics and Skills for Negotiating <p>People Development</p> <ul style="list-style-type: none"> • ILRMD504 Leading People to Higher Performance • ILRSM517 The Coaching Mindset for Engaging and Developing Others • ILRSM518 The Coaching Process for Engaging and Developing Others • CEPL556 Conflict Resolution • ILRMD510 Managing Communication Challenges • ILRHR556 Employee

As a supervisor, superintendent, manager or staff employee, evaluating where your strengths and weakness are within your individual roles is key to your performance success. Vale has streamlined and aligned all eCornell courses to the various competencies of your respective roles.

What does eCornell offer?

eCornell offers an invaluable opportunity to strengthen the behavioural competencies that have been defined for your respective roles. Employees can pick from a series of courses in the competency area(s) they would like to develop.

The cost associated with these courses will be sponsored by corporate L & D.

Additional information and instructions on how to register are available by visiting:
<https://www.earningthroughlearning.com/56/Vale/>

What if I am interested, but not a supervisor, superintendent, manager or staff employee?

Vale offers a separate eCornell registration site for ALL employees who can demonstrate the need for an eCornell course outside of Corporate L & D's recommended courses in accordance with Vale's instruction for educational assistance (Canada-UK region). If approved, you are welcome to review the following site for course descriptions:

https://www.earningthroughlearning.com/57/Vale_all_employee/

Want to learn more?

Connect with your HR Business Partner to learn more about the eCornell Professional Development Program.

How to enroll? Visit:

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



Staff Competencies

Thinking & Knowledge	Business	Interpersonal & Leadership Skills
<p>Problem Solving / Analysis</p> <ul style="list-style-type: none"> • HAME505 Facilitating Group Decisions • HAME511 Managing Strategic Change • LSM502 Strategic Thinking • CEPL556 Conflict Resolution 	<p>Quality</p> <ul style="list-style-type: none"> • LSM506 Executive Decision Making • ILRMD503 Overcoming Barriers to Successful Management • CEPL554 Earned Value Management • HAME507 Mastering the Time Value of Money • HAME513 Understanding Financial Statements • HAME514 Using Ratio Analysis to Evaluate Financial Performance <p>Results Focus</p> <ul style="list-style-type: none"> • HAME506 Improving Personal and Workgroup Productivity • HAME511 Managing Strategic Change • ILRMD507 The Power of Managing Your Time and Personal Priorities • HAME518 Creating Service Cultures 	<p>Adaptability / Flexibility</p> <ul style="list-style-type: none"> • HAME506 Improving Personal and Workgroup Productivity • ILRMD507 The Power of Managing Your Time and Personal Priorities <p>Interpersonal Skills</p> <ul style="list-style-type: none"> • HAME510 Managing Communication Challenges • ILRSM511 Negotiating Support and Buy-In for Your Agenda • HAME519 Secrets of Phenomenal Customer Service • ILRMD509 The Impact of Personality Styles on Communication • ILRSM515 Preparing for Negotiation • ILRSM516 Tactics and Skills for Negotiating

The Transfer of Tacit Knowledge in the Workplace: Part 2

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



In this edition of the L & D Newsletter, we are continuing the discussion with Rodrigo Ribeiro, senior lecturer at the Production Engineering Department of the Federal University of Minas Gerais (UFMG) in Brazil.

If you recall, “tacit knowledge” is what people learn outside of formal training programs or reading books, manuals or procedures. It is the “unspoken” (observing how someone with more experience does something) or the “inferred” (that which occurs informally in a particular situation) type of learning. Arguably, it is the most in-depth form of learning that enables a person to get really good at a task.

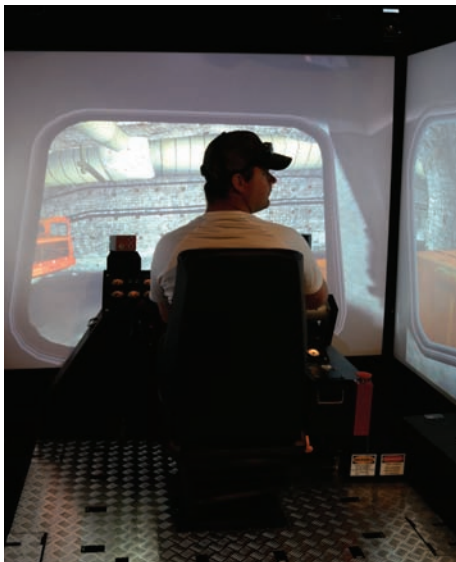
In the second part of the series, we explore this interesting research project further.

L & D News: So what is the relationship between tacit knowledge and traditional on-the-job training?

Rodrigo Ribeiro: The question is: has anyone taught us about all the rules we live by in the company and in our daily lives that we just grasp over time? In a general sense, the answer is no. We have learned this mostly by being brought up in a certain culture and the same applies to working within distinct industrial settings. Therefore, it is difficult even for experts — whether shop floor workers or management —

to completely convey to others how they do things, because sometimes they are not even aware of the rules — written or implied — that they work by. On the other hand, an experienced worker or supervisor can immediately see that a rule was, or is about to be, broken when a given work situation prompts them. This is the reason why on-the-job training plays such a major role in the transfer of tacit knowledge by transferring those elements not found written in a document anywhere.

Coming back to the judgments supported by collective tacit knowledge, the ability to prioritize correctly, to retrieve information selectively or to identify key tendencies relies on the ability to carry out “judgments of relevance/irrelevance.” For instance, usually there are more items to complete in a preventive maintenance program than there is time to do so. This requires those with experience to decide what to do immediately and what to leave for the next calendar or run-time dated maintenance inspection while being able to avoid breakdowns between inspections and higher maintenance costs. In a new market strategy while assessing all the business risks, such experience calls upon the ability to distinguish the **worth** from the **worthless** within a sea of information — what has been compared to spotting the right needle, not in a haystack but in a needle stack! In the world of security or marketing intelligence, this skill becomes even more relevant.



Lastly, the “judgment of risk/opportunity” enables us to assess risk, to anticipate accidents and problems, to analyze trade-offs effectively and so forth. This is essential, for instance, to establish a safety program based on prevention. Thus, in addition to analyzing past accidents, new research on how to increase safety has focused on studying “situations of normality” where production happens smoothly and there are no accidents. The research results have showed that it is the workers’ ability to effectively deal with conflicting demands, unforeseen events and variability that enables them to anticipate and prevent accidents at the same time they deliver the target production.

The above examples illustrate that all types of tacit knowledge are present throughout the organization, from the shop floor to top management and that it is shown to be specific and situated. This is because what is similar or different, relevant or irrelevant or even a risky or safe situation changes from one industrial setting, and even from one activity to another.

This implies that a person is unlikely to possess tacit knowledge for every situation he or she may encounter in the workplace because any person can only have the tacit knowledge connected with the specific areas they have worked in/with. In other words, just looking at a person’s years of experience is not a good enough measure to fully qualify someone if tacit knowledge is to be taken into account. An example would be an experienced heavy-duty technician from a surface industry being employed in an underground environment to work on different equipment for the first time — the person would be a wealth of knowledge, though the environment and equipment would be completely

new to them. Consequently the tacit knowledge for this situation would not be present for them and would need to be developed.

In the next newsletter, Rodrigo will explain just how difficult it is to try and capture all this unwritten or implied knowledge using the written word and why attempts to do so have clear constraints that must be understood if pursued.

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.

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.

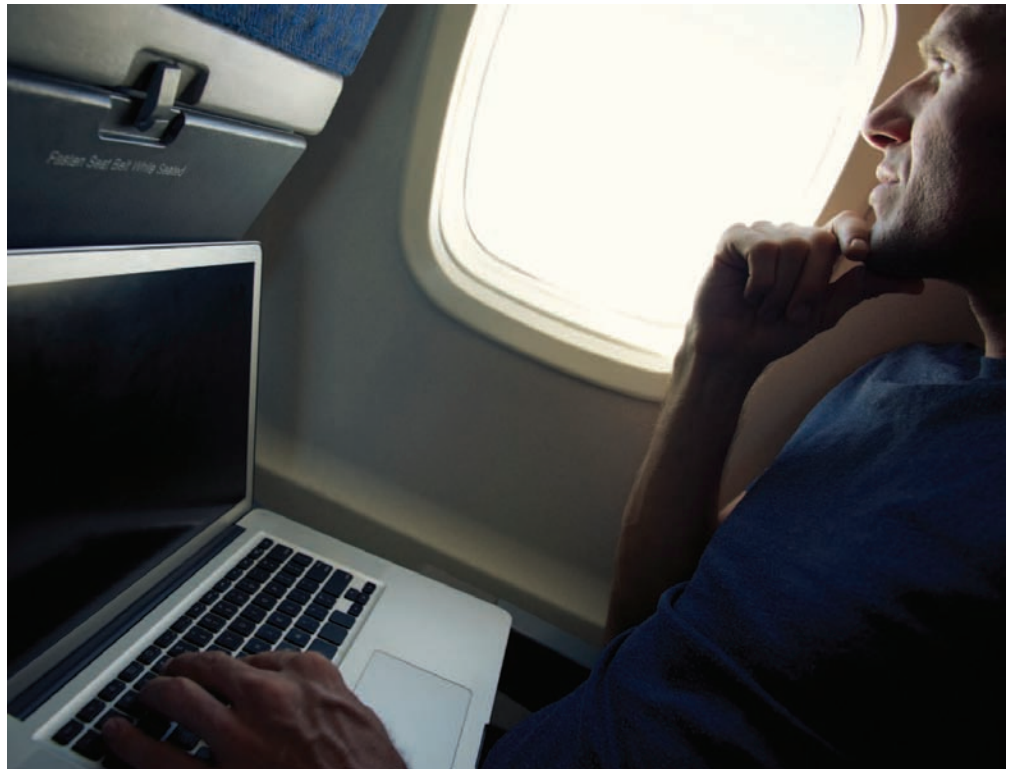
Distance Learning (Cont'd from page 1)

Types of distance learning

There are two types of distance learning: **synchronous** and **asynchronous**. Synchronous instruction requires the simultaneous participation of all students and instructors through remote connections. The advantage of synchronous instruction is that interaction is done in “real time” and has the immediacy of impact and benefit of group interaction. Examples include: teleconferencing, web conferencing (webinars) and Internet chat (OCS). Many of these options are becoming more widely available at Vale and the preferred method of connecting people in our geographically dispersed organization.

The main challenge of synchronous delivery is that it requires people to be brought together on a specific schedule, which may be difficult to coordinate and may add to delivery costs because of the requirement for multiple sessions.

By contrast, asynchronous instruction allows the learner to choose their own instructional time frame (within the limits set by the course design) and interact with the learning materials and instructor according to their schedule. Asynchronous instruction is more flexible than synchronous instruction by accommodating multiple learning levels and schedules. The challenge of this method is that relies on the student to be self-motivated. However, a highly engaged distance educator can be very influential here. In addition to planned check points, time limits are usually set to maintain focus and participation and also to ensure the course gets completed. Examples of asynchronous delivery include e-mail, audio or video courses and eLearning (CBT) modules.



While we are only in the early stages of formally advancing distance learning as a support option for alternative forms of learning in our business, the quest to foster a culture of learning excellence means we will continue to evaluate the best and most sustainable learning mediums available to provide employees opportunities for personal growth.

Our continued pursuit of process improvements and optimization through challenging some of the old norms of employee development is being done in alignment with two of our core values: **improve together** and **value our people**. Consequently we believe the practice of distance learning will continue to grow for applications where it makes sense to do so and will become a more strategic component of the larger social mission of education and training within our company.

Leadership workshops

In light of the current economic challenges the leadership programs scheduled for the remainder of the year have been cancelled. A full schedule of offerings is being pursued in 2013. Please stay tuned for more information in future issues.

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.