

Knowledge Retention — What’s Your Process?

Our processes and work instructions provide the information needed for our performers to understand “the who, what and how” to do the task. But where do we keep the information needed so everyone understands “the why and the reasons behind” our work?



Work instructions tell the performer what to do, but because they are instructions and not narratives, they seldom provide facts and context needed to understand why the work needs to be performed as instructed. Technically, performers can say they are limited by the instructions to only do the tasks by the ways and means described. However, many managers today like to tell us about their “empowered associates.” But are their empowered associates “empowered” to go beyond the standard work described?

For a performer to be able to make an “empowered decision,” they will need to have much more information than the work instructions provide. Here are a few questions to consider:

- Does your company, department, work group and performers have a process for identifying credible knowledge applicable to the work being performed?
- Is it tied to the task, the process, the customer or their knowledge of the craft?
- Who is the curator?
- How is such knowledge identified as credible? How is this knowledge maintained?
- How is it shared so that it becomes institutional knowledge and not merely a “best practice” of a single performer or unit?

Agency Authorities

At my desk at work, to the right on a shelf, I have a small number of key “Agency Authority” references that are most frequently consulted in my work. They include *SAE’s Aerospace Material Specifications*, *SAE Ferrous Material Standards Manual HS 30*, *SAE Fastener Standards Manual HS 4000*, *Machinery’s Handbook*, *Machining*

Data Handbook Vol 1 and 2, *Steel Bar Products Guidelines* and several others. Behind me, I have volumes of ASTM standards covering steel, brass and copper, aluminum, test methods as well as the metals and alloys in the Unified Numbering System.

Continuous Improvement Meetings

Share the lessons learned on each shift by reviewing in your daily huddles. Who is collecting the lessons learned that your team discovers each shift? How are they captured? Where are they kept? How are they shared?



Daily huddles are the ideal setting for prioritizing. The leading shops I have visited typically huddle around a whiteboard in the operating area and review the issues, actions taken and results of the improvements implemented over the past 24 hours in the operation. Capturing the lessons learned on a huddle-by-huddle basis is important.

Documenting these and then reviewing them so that they become institutional capability requires more than just a one-time mention. A photo of the problem, a photo showing the solution and a brief write-up — no more than a paragraph — can be created and saved. Often these process corrections are saved in the file for a particular part, but perhaps the lesson learned is more universally applicable. Your organizational ability will be enhanced when you find a way to document it and share throughout your organization, rather than just keep it a little-known secret among those involved. Can you create an online repository of all continuous improvement implementations, perhaps accessible as videos or by QR code?

A weekly or biweekly continuous improvement meeting involving cross-shift personnel can be used to ensure that the lessons learned are widely known among all of your

performers. In addition, a monthly celebration of your team's lessons learned — I like to call them Continuous Improvement Victories — can reward your team with a sense of personal accomplishment and recognition of the additional value they help to create in your shop. Celebrating your team's lessons learned is the final step of the 8-D problem-solving method for a reason. A monthly recognition of your team's Continuous Improvement Victories will help the lessons learned be adopted across your culture, and not just be a document in a file somewhere.

Apprentice Notes

I did not have a formal apprenticeship when I transitioned from my lab supervisor job at U.S. Steel to plant metallurgist at Bliss & Laughlin Steel. However, if I was to make sense of the variation they created in our shop process, there were a host of things that I needed to learn about the other steel suppliers and processes they used. I took detailed notes about each supplier's process path, statistics about their capability and even determined a typical level of their "background" or residual levels of various nonspecified chemical elements in their process.

Like forensic investigators use DNA today, I was able to confirm when a product returned was, in fact, of our production or not by confirming that it met the characteristics of the material provided. (Note: In a small number of cases, the claimed problem was not from the material we had supplied. These notes also included process capability, sketches of product attributes, heat treatment notes and more.) Where is this type of information available in your shop?

Ways and Means

Notebooks and written reports were a thing when I was early in my career. Today, computers, cloud storage and online technologies make preserving and accessing a variety of media containing knowledge immediately accessible. How does your company capture, record, preserve and make available the institutional knowledge to help your performers master their craft? ⊕

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- **David Thuro**
Thuro Metal Products Inc.