



# Standardize, then Stabilize Improvements

*Implementing TWI: Creating and Managing a Skills-Based Culture*

**Patrick Graupp and Robert J. Wrona**  
Productivity Press, 2011, \$49.95.

The authors are leaders in the revival of Training Within Industries (TWI), which almost died after World War II, but not completely. One of the authors, Graupp, has promoted TWI for 30 years; Wrona for ten, so the book is the voice of experience. After WWII, TWI lived on in Japan, where many manufacturers took up with it, and Toyota embedded it in its famed Toyota Production System (TPS). Learning about TWI helps one to more fully understand TPS. The authors nicely illustrate the linkages between TWI and lean.

More important, TWI is an improvement methodology in itself, right at the nitty-gritty working level. It has stand-alone benefit, but when coupled with lean thinking, TWI stabilizes improvements so that gains are held, and it stimulates daily thinking so that continuous improvement advances beyond sporadic kaizen events. Thus, TWI is an antidote for inability to hold gains and move forward, the bane of many lean initiatives. TWI is summarized in simple-looking procedures on cards that everyone can carry as reminders, but like sticking to a diet, TWI's benefit comes by habitual practice: Systematically learn to do differently and practice until it's down pat. TWI makes this dose of disciplinary medicine become palatable.

*Implementing TWI* is not a training manual. *Creating a Skills-Based Culture* is an apt subtitle. As a skill, TWI is learned in personal instruction sessions coaching you to do it in practice. That's not in this book. Rather it suggests questions leaders need to consider

when implementing TWI, including situation assessment, order of introduction, and so on.

For example, TWI has three modules: Job Instruction (JI), Job Methods (JM), and Job Relations (JR). Chapter 3 ties these together, discusses factors for determining the sequence in which to implement them, and ends with an ideal TWI deployment sequence. Even lean veterans accustomed to rooting in cultural quagmires for spots to plant lean thinking are apt to gain a few more insights from this discussion.

*Implementing TWI* also stresses stabilizing a process before starting to improve it. That is, examine how a job is being done now, and why. If you see great variance in methods now in use, you have no base from which to improve and hold gains. So standardize and stabilize. Without acquiring the discipline to do this, any improved methods are not likely to be held either.

Another topic addressed is the difference between Standard Operating Procedures (or staff-written work instructions) and Job Instruction Breakdowns. This intrigued the reviewer because of prior exchanges with Toyota senseis differentiating explicit knowledge and tacit knowledge. Explicit knowledge can be codified, or even reduced to software, and structured for conventional training. Tacit knowledge has to be personally sensed, as when learning to ride a bike, or learning to "read the tone" of a business meeting. Tacit knowledge also soaks up awareness of many other processes going on around you, and which may be affected by

work at hand. Despite extensive digitization, much direct work remains surrounded by activity learned tacitly.

Tacit knowledge helps prompt "good questions," thus stimulating process improvement. When experience walks away, tacit knowledge takes time to re-build because it is not suddenly injected into a trainee. However, practicing TWI and cross-training promotes the accumulation of tacit knowledge. That's very useful even if you have a good "knowledge management" system in a company.

People who train others must also study the trainee and in addition, re-think how work is done and why, in order to do a job breakdown for training. Thus the trainer learns too; sometimes more than the trainee. The Job Methods module stresses detailed questions within the full context of the work and discussions of proposals with bosses and co-workers. Doing this builds tacit knowledge as well as explicit knowledge, so TWI in practice builds a skills-based culture without using much intentional behavioral change methodology. It just happens. Change what people do at work, and little by little, they change their own culture.

Graupp and Wrona finish with a series of case studies and commentary. You can top off your learning about TWI by reviewing what others have accomplished, and especially the pitfalls they encountered.

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