



Toyota Kata

Few books come along that I recommend to every lean practitioner and their bosses. This is one of them.

Kata means a pattern of behavior or thinking. Originally a martial arts term, kata is a standard way to think about work, but it is not the same as standard work. Rother describes it as “a way of keeping two things in alignment or synchronization with each other.” The two things to keep aligned are a process’s current condition and its targeted future state. That emphasizes knowing a process in detail now and seeing a clear vision of some future state for it; then problem-solving your way from here to there. No one can predict how that will go; the pathway is uncharted. Take it one step at a time.

In a Toyota factory, a targeted future state is a specific condition of the process. An ultimate future vision is one-piece flow; zero defects; when the customer wants it. And yes, there are budgets and cost targets, but they are not a process vision. Neither are KPIs. Only the process is real; the numbers aren’t.

Kata is the heart of the Toyota Production System. All else supports it; every principle; every technique.

Rother describes two kinds of kata: Improvement kata and coaching kata. On the way through, Mike reviews numerous industrial problem solving pitfalls such as: unwitting preconceptions, quick-fix-and-forget-it, analysis paralysis, not going to the gemba, jumping to conclusions instead of digging for root cause — and a key habit, hard to break, solving other people’s prob-

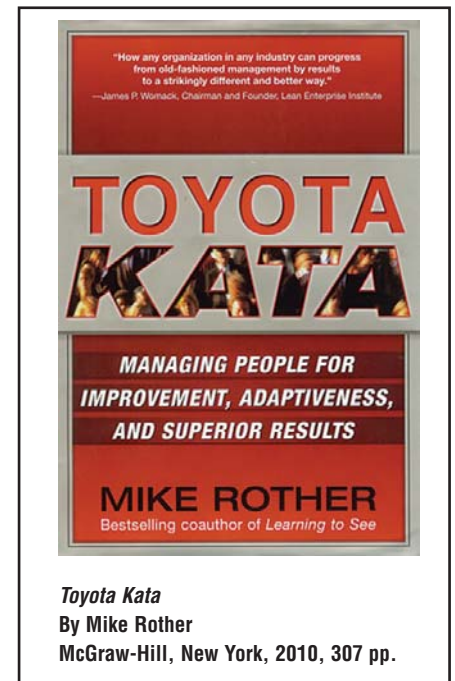
lems for them instead of coaching them how to solve them.

How we approach our problems is a big part of work culture. Change that, and you have substantially changed work culture. Everyone has to learn improvement kata by practicing it. The steps are related to Plan-Do-Check-Act and A3 logic, but neither of these formats are magic. These tools aid the thinking, but don’t make it a mental habit through daily practice on the job. To practice moving a process toward a target condition, Rother describes five questions to ask over and over (p. 155):

1. What is the target condition? (*The Challenge*)
2. What is the actual condition now?
3. What obstacles are preventing you from reaching the target condition? Which one are you addressing now?
4. What is your next step? (*Start of next PDCA cycle*)
5. When can we go and see what we have learned from taking that next step?

To start building your own mental pattern to tackle any process or situation, Mike recommends internalizing these five questions and start practicing. These questions are a distilled-down version of the thinking. You will develop more insight as you go along.

In the beginning learning to patiently observe a process or situation struggles against our instincts. We prefer to debate countermeasures without observing a process until a root cause becomes obvious. Rother



cites the engineer who watched a paint process for hours to see why some blades being painted came out with dents. Meanwhile his fellows proposed all kinds of solutions assuming a root cause, or to prevent blades touching whatever the root cause — expensive ideas. Turned out that as the paint chain turned a corner, inertia let the chain hooks unscrew a little so adjacent blades could contact. Simple root cause; simple solution.

Another struggle against instinct is follow up to see whether an improvement worked, and continues to work. Instinct is to install a fix, perform a cursory check; then move on to other concerns. But unless a fix is instituted as standard work and stabilized, we have not made a stable improvement — maybe because we forgot some supporting changes for it, like preventive maintenance changes, but also because nothing stays the same for long. Product mixes change; operators change; departments move; surrounding flows change. Unless an improvement stabilizes and an appropriate next stage target is visualized, a



process will degenerate. It has to be observed constantly. Continuous improvement never ends because we must run hard to stay in place, much less advance to a new target.

Part of celebrating an improvement milestone is aiming for the next milestone.

Yes, like the rest of us, Toyota has group kaizen, learning events sometimes called jishukan, another martial arts term. But improvement kata takes care of many problems, and within Toyota everything is a learning opportunity. Couple improvement kata with yokoten, systematic communication of problem situations and countermeasures as widely as possible, and by comparison, the way most of us practice lean only imitates TPS's visible techniques with minimal change in habitual thinking.

Coaching Kata – A Different Kind of Leadership

Coaching kata is teaching other people to learn improvement kata on the job. Outside Toyota, it is almost unknown because it is impossible to grasp without first having a concept of Toyota's improvement kata. By necessity, coaching kata is also learned on the job, so it is also called mentoring. Mentors learn more than mentees because to teach anything to others, you must master a subject well enough to organize your thinking about it.

Mentors deepen their own understanding by seeing how their mentees think when guiding them in improve-

ment kata. Coaching kata is the heart of what every Toyota team leader and supervisor should learn to do, and all employees should learn improvement kata. Senior leaders coach junior leaders in coaching kata, so that inside Toyota, knowing the thought pattern and problem solving capability of everyone on a team is a very important leadership responsibility. This applies at all levels. Everyone inside Toyota is a mentee or mentor, or both, right up to the chairman.

Coaching kata is a different kind of leadership — more than a change in style. It's a different concept of what leaders are supposed to do. Leaders coaching improvement kata don't direct people very much. They ask questions, and maybe suggest next steps, but they do not tell mentees what to do or solve problems for them. They may instruct them in detail on a task new to them, but not how to improve a process. Leading by asking questions is too simple a description. Mentors herd mentees' thinking down the "root cause channel" working through the steps of improvement kata.

Mentors must restrain themselves. Most of the time novices' countermeasures will not be as good as their mentors. Never mind. The objective isn't best solution right now, but to develop people. In time, if most employees exercise improvement kata every day, the effect dwarfs bright solutions to a few problems by a few people. A few people will be assigned the most technical problems anyway.

Coaching kata also calls for a huge change in evaluating most peo-

ple's performance. Accomplishments by individuals count for less than how well they coach others.

Kata confers subtle advantages to Toyota — or any company practicing it well. Much of the fog (but not all) lifts from communication, and they can adapt when other companies can't. Senior managers well tuned to their peoples' capabilities sense what can be done, so a strategic shift can be executed well, and swiftly.

Besides being counterintuitive, a big impediment to improvement kata is that no better way has been found to make it thrive than by constantly coaching kata — not classroom teaching, not simulation, not consultants, not metrics. It's in-the-gemba learning, molding the culture by coaching people how to think doing real work. And that has been an Achilles heel to Toyota, which as is generally recognized, expanded too fast for mentoring to keep up, and is now paying the price trying to overcome this.

Mike explains kata drawing on personal experience and using manufacturing examples, so he does not get into product design or non-manufacturing. Those not in manufacturing may need to translate to their own situation.

This review is a mini-slice of Mike's book. You need a deeper understanding of kata before trying it at home, so you should read the whole thing.

Reviewed by Robert W. "Doc" Hall, editor emeritus of Target and a founding member of AME.

***It isn't that they can't see the solution.
It's that they can't see the problem.***

G.K. Chesterton, *The Scandal of Father Brown*

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