

# THE IMPROVEMENT KATA FOR KIDS

## Things we've learned about coaching our children

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As parents of two beautiful children with different needs we want them to be healthy and happy. Our daughter learns quickly and relatively easily in conventional ways. Our son, with Aspergers, also very bright, learns in different ways. We have put a lot of effort into helping both achieve their potential, like most good parents. Fortunately I learned a new approach at work for improving our problem-solving capability, called "Kata." Specifically, the "Improvement Kata" is a scientific pattern for meeting challenges and the "Coaching Kata" is a structured way of teaching that scientific pattern. You may be aware of these routines from your workplace, but if your family practices them then the skills will also be ready for your children to use whenever *they* need them.

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We live in a world where change happens faster than ever before – technical innovations change our possibilities and responsibilities in life drastically. For example, in 2014 the top 10 jobs in America did not exist ten years before. More radical: students in higher education study for new jobs that may be completely changed or even gone by the time they graduate. So teaching students to memorize information or even learn the practical skills needed for a specific job is not the answer.

This means for me, as the mom of two children, that I need to change my perspective about raising my kids. I cannot teach what I do not know... I cannot anticipate all of the possibilities of my future, let alone theirs. I am aware that my beliefs about the future could even limit the possibilities of my kids. The real challenge is to teach ourselves how to learn new things, and how to apply that learning strategy to whatever situations we face. My husband and I want to teach our children to *learn how to learn*, in a way that is effective for them.

I was seeing how practicing something called the Improvement Kata and Coaching Kata was improving performance and ways of thinking at my manufacturing workplace, and I thought that it could be something to try. But my experience was with adults. We have two children: a son (11) with Asperger Syndrome, and a daughter (9). Would these Kata work for them too? We agreed to try it.

But before I give you some of our personal experiences with these Kata, let me introduce them to you.

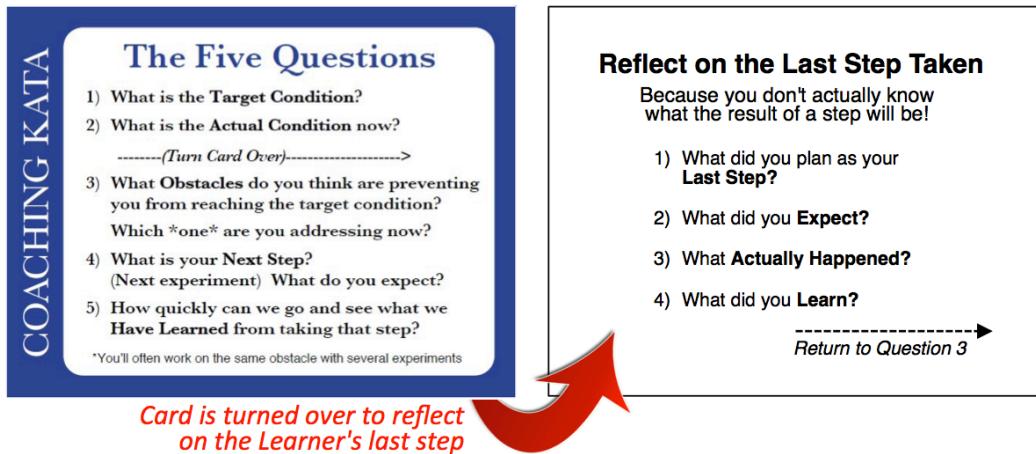
### Toyota Kata in Brief

The Improvement Kata and Coaching Kata were first introduced by Mike Rother in his book Toyota Kata. Kata is a term from the martial arts, meaning basically a pattern of fundamental movements to learn and make habitual through structured, physical practice; particularly at the beginning. The individual movements that get practiced are elements of a broader pattern to achieve a specific aim, which in the case of Toyota Kata is scientific thinking applied to a challenge. In the early stages you practice the Kata exactly as the Coach instructs, and as these specified movements become natural the Learner can begin to personalize the methods and even improve on them. Eventually it becomes a natural sequence of moves that the Learner can access in a variety of real situations, often without thinking about it. An experienced driver does not have to think about where the accelerator pedal is or how to shift gears. They can focus their attention on their goal and the dynamic conditions of the roadway.

Toyota Kata has two main elements: the Improvement Kata (4 scientific steps for achieving difficult goals) for the Learner and the Coaching Kata (based on a set of five fundamental questions) for the teacher. These two Kata combine a scientific working pattern with techniques of deliberate practice, to make scientific thinking a teachable "meta-skill" anyone can learn.

The Coaching Kata involves a repetitive line of questions that the Coach poses to a Learner, who is following the Improvement Kata pattern to meet a challenge. The purpose of the Coaching Kata questions is to teach the Learner how to handle challenges by establishing and iteratively working toward interim goals in a scientific way.

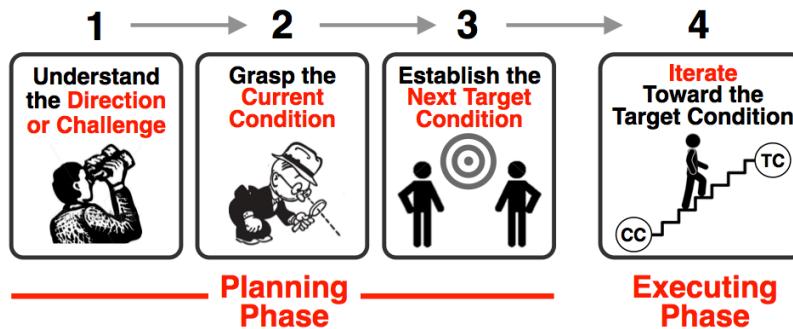
This includes conducting experiments and evaluating them. By practicing the Kata routines on a production line in a factory, for example, problems get solved, goals are reached and the production line improves. The Coaching Kata questions are summarized on a reference card for the Coach to use, which looks like this:



**Figure 1. The Five Questions of the Coaching Kata**

At work, the overall challenge to be met is usually brought to the Learner by his or her manager, and is connected to the goals of the organization. The Learner then develops his or her next "Target Condition" on the way to that challenge, in dialog with the manager/Coach. The Learner does not know how to reach this Target Condition, because it lies beyond his current knowledge threshold. This is completely

normal in the Kata approach. Usually there are already several perceived obstacles to reaching the Target Condition, and more may appear along the way. The task for the Learner is to achieve the next Target Condition by its achieve-by date by conducting rapid experiments against those obstacles, one obstacle at a time.



**Figure 2. The Four Steps of the Improvement Kata Pattern**

Every day along the way, the Coach asks the five questions, starting with, "*What is your Target condition?*" The Learner tells what he now knows and has experienced from the latest experiment. Sometimes the Coach will add the 'clarifying question,' "*Can you tell me more about...?*" so

that the Learner thinks more deeply. By asking these questions the Coach helps the Learner grasp the current situation and design an appropriate next experiment. In the experiment the Learner often changes only one thing – so the Learner can scientifically experience the effect.

## **Toyota Kata Works!**

When I was coached by the five questions I experienced the effect they have. It taught me how to define my next goal based on recognizing where I am starting from. Then the Kata routines accompany you and help you to learn and achieve beyond your limited current beliefs. One of my favorite examples is that of a colleague who started with the idea of learning a new working pattern (the Improvement Kata) so he could improve his effectiveness. Within weeks his learning shifted to do disciplining himself in using the pattern consistently. Then, after a month, his learning shifted again to personalizing his own Kata working pattern. In a few months time this Learner had evolved to the point that he knew how to keep growing and learning.

We had already practiced Kata in our personal lives too, when our family was searching for a new house. I learned to define what our ideal home would look like (challenge) compared to our existing home (current condition). Then I saw the gap between where I was now and my next goal. I knew what I wished to achieve, but had no detailed idea of how we would get there. By wanting to learn beyond my threshold of knowledge I was ready to step out of my comfort zone and experiment against the obstacles. Needless to say: I got motivated to deal with the obstacles rather than trying to avoid them.

But would the Kata approach be as helpful for our children as it was for me?

### **Toyota Kata and Our Autistic Son**

At home, what I learned from observing my son with Aspergers is that he needs to be instructed in new behavior patterns. His brain works differently than mine. When we watch a movie I see the story but he sees detailed pictures in random order. Although he is intelligent, his autism makes it hard to ‘grasp’ the whole picture. This is probably one of the reasons he learns differently and less quickly than his peers without Autism. He applies rules so strictly that variation by context confuses him.

For example, as a small child our son had a hard time grasping that undergarments need to be put on first. In his mind, to put an undergarment under other clothes you first have to be wearing the other clothes. When he tried that it did not work. It took him a long time to grasp the concept.

Our son's endurance for chaotic situations is low: he gets stressed easily. To grasp the situation he creates patterns that he can repeat over and over. Change is stressful, so improvement is a big hurdle. Learning things needs to be structured, and learning to learn needs to be structured too. That's why we love the Kata so much.

To help a person with Autism you need to be predictable, clear and able to repeat yourself exactly. Toyota Kata is all of that. The more risky part of Toyota Kata for us with my son is that it pushes the Learner out of his or her comfort zone into the unknown and into experiments. Not knowing is stressful for most persons, but people with Autism can block themselves entirely due to the stress of not knowing. The Kata take you to that point and beyond it through the Coach's line of questioning. It seems like this is scary.

For our son, however, the fact that we had to finish all the questions surprisingly carried him through this stressful point. At that point we name everything we know: the who, what, where, when, how and why. We isolate the unknown, create the next experiment and think about what to expect, just like Question 4 of the Coaching Kata asks us to do. We create an experiment as a *known way dealing with the unknown*, which made this step workable for our son.

For two months we used the Kata pattern to manage the homework our son had to do each week. Using Toyota Kata we learned that our son shifts his focus fast – mixing up the goal (learning to follow a plan) and the content (evaluating the activities). The Kata helps to fix his focus during the questions. Secondly, our son learned how much he knows and how much goes fine. His self-esteem grew. And thirdly, he experienced shifting his focus from stressfully avoiding his obstacle to an experiment to handle the obstacle. He got perspective to act. And because he could only do one experiment at a time, he learned to re-focus again. He got the experience that by focusing on one obstacle, he often eliminated 3 obstacles. In spite of this experience, however, he still does not believe in focusing on just one obstacle at a time. But that is not much different from most of my work colleagues!

Most recently we witnessed our son being in a chaotic stressful situation (cleaning up his room),

asking himself part of the Kata questions to grasp his situation (he had no card) in searching for new approaches to deal with Lego. Our son now has an explicit, simple routine to grasp the situation. He knows the questions and the routine, so he can make new small effective steps on his own. He can create a perspective to try something new. He can solve his problems, like getting his Lego organized so we can clean his room.

Using the same questions each time gives him structure to make a step forward. He remembers the questions – so he can ask them himself and he takes new steps on his own. My bonus was to have a better understanding of what a beautiful mind our son has.

### **Using Toyota Kata with Our Daughter**

Our daughter learns easily. It's like once she sees or hears something she knows it. She thinks fast. There is no need to explain that social context asks for variation: she easily applies general principles in different contexts. She is the one running through a museum during family trips, asking us to speed up. And if you wonder if she really saw it, just quiz her and you'll find out: she knows it all, even a week or two after the visit. She starts with an overview, then turns to details. Instructing her on the details or a little part of the total picture actually has a limiting effect on her.

The first thing we learned in using the Kata with our daughter is that they help her slow down the steps of her thinking and give her more focus. She has the urge to answer not one question, but the next one as well. Secondly, our daughter learned to define her goals in a more explicit and measureable way. For instance, she wants to learn Spanish, but her goal is to do so beyond just doing well on tests: she'd like to retain what she has learned for future use. Thirdly, Kata helps our daughter to clarify what she is thinking, which allows more people to follow her thinking pattern.

Like the colleague at work I mentioned earlier, our daughter can now articulate how Toyota Kata works. The bonus for me is that I see how she loves to think of an experiment, do the experiment, evaluate it and adjust her thinking. I think this equips her well for the yet-unknown challenges of her future.

### **Toyota Kata is Useful for Different Needs**

The Toyota Kata book points out that the Coach is responsible for the Learner's success, but the Learner is responsible for the doing. This relationship creates a connection between these two roles. Similarly, we feel that using the Kata allows us to respect each Learner's ability to learn, because the Learner takes responsibility for his or her own learning. In our situation our children learn differently, but we have one approach that helps both of them. For us as parents of two beautiful children with differing needs, having Toyota Kata that works for both is wonderful.

By using Toyota Kata together, our children are also learning from one another. Where our daughter goes right, my son goes left. But the funny thing is that these paths come together and even support each other. As our daughter was learning to describe the details more, our son listened and understood more about our daughter's struggle. He was even able to help her effectively – he had constructive ideas for her experiments with his eye for details. When our son was having a hard time initiating his experiments, our daughter helped him get going. When the context changed she pointed out what changes might be an option, and even suggested improvements during the experiment. Normally changing something is the recipe for an extra stressful situation, but we were surprised to see that our son was open for the suggestion. He tried it.

### **An Important Note about Kata**

If you now picture our household as always being into scientific thinking – that is not us. Most of the time we are just us as we are. We spend time together without any other goal than being together, drinking coffee while sharing some experiences of the day before everyone goes to his or her next activity.

There are times when we feel not so happy or we are frustrated with something. Then, when the frustration stays, it is time to be clear again. And when we are ready to do what it takes to change the situation... then and only then...one of us reaches for that little card with five questions on one side and four on the other. Any one of us might start saying with a big smile, "*Question one: what is your target condition?*" And yes – sometimes one of our kids does it – just to tease us and to get us to learn from our disappointments.

Bring on the future. We're ready for it.