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Text adapted from Mike Rother



Welcome

to the

Kata Coaching Dōjō

Phase 1: Having a precise Target-Condition



Coach: *What is your target condition for this process?*

Improver:

- A. My target condition is to improve the Kata Jet process.*
- B. The challenge is to reach a hit rate of 100% within 6 months. At first we aim for a hit rate of just 40%. That is already difficult enough since we cannot change the distance to the target and the 500\$ budget is really too small for achieving this.*
- C. My target condition is to stabilize the flight distance at $200\text{cm} \pm 20\text{cm}$ and to reduce the cross deviation so that we hit the center with a maximum deviation to the sides of $\pm 20\text{cm}$.*

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 2: Understanding Actual-Condition



Coach: *What is the actual-condition now?*

Improver:

A. We don't hit the target precisely enough.

B. The hit rate is at 20%, but with this material quality that is the best possible.

C. During the last run only one throw was a hit, therefore we have to move the lower clips further to the back.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 2: Understanding Actual-Condition

Situation: The data presented for the actual-condition is imprecise.



Coach: *What is the actual-condition now?*

Improver:

*A. The hit rate is at 20%. The flight distance for the last 5 attempts was like this.
(show outdated data).*

*B. The hit rate is at 20%. The flight distance for the last 5 attempts in average was at 235cm.
(show averaged data)*

*C. The hit rate is at 20%. The flight distance during the last 4 weeks was like this.
(show pie chart)*

Phase 3: Identifying obstacles precisely



Coach: Which obstacles are preventing you from reaching the target condition?

Improver:

A. We don't hit the target precisely enough.

B. The flying distance is wrong.

C. Our process is not the problem. Our colleagues from the pre process should work more precisely.

Questions for the Coach:

- 1) What is the problem with each of these answers?
- 2) What should the "perfect" answer contain?
- 3) How would you react as a coach in this situation?

Phase 3: Choosing on obstacle to address.

Please copy the obstacles to your obstacle storage before starting this exercise.

Coach: Which obstacles are preventing you from reaching the target condition?

Improver: The launching height varies, the throwing force varies and the launching angle varies as well. Many mistakes occur when we employ students for a holiday job during the summer break. Additionally we have a bad hit rate after the annual maintenance.



Coach: Which one are you addressing now?

Improver:

- A. I don't know, maybe the high number of mistakes with students during their summer job.
- B. The bad hit rate after the annual maintenance.
- C. I'm not quite sure.

Questions for the Coach:

- 1) What is the problem with each of these answers?
- 2) What should the "perfect" answer contain?
- 3) How would you react as a coach in this situation?

Phase 3: Make it a sentence

Reaching distance leads to 30 sec. time loss per cycle.

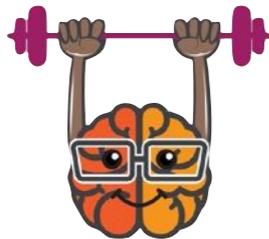
obstacle

unwanted effect

Sorting *due to* order of delivery, leads to 5 min. time loss.

Walking *due to* position of the fixture, leads to 47 sec. time loss.

Correction of data *due to* format of received data, leads to 8 min. time loss.



Workout

Draft 3 obstacle sentences for a topic you are currently working on. Differ precisely between obstacle, root-cause and unwanted effect. Use the following sentence structure:
 „(obstacle) **due to** (cause) **leads to** (unwanted effect).“
 Afterwards discuss your sentences with your team.

Phase 3: Choosing one obstacle to address.

Improver: The launching height varies, the throwing force varies and the launching angle varies as well.



Coach: Which one are you addressing now?

Improver:

- A. The difference in weight on the wings that is responsible for the cross deviation.*
- B. We have to reduce the variation in paper thickness. The purchasing team must talk with the supplier and ensure that we get good quality.*
- C. The imprecise pre-fabrication process. The pre-fabrication department folds the jet to imprecise. With this poor quality we can never hit the target.*

Please copy the obstacles to your obstacle storage before starting this exercise.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 3: Choosing one obstacle to address

„Recognizing and treating implementation obstacles“



Coach: ...which one are you addressing now?

Improver:

A. I have to talk to the team leader to find out when I can observe the process.

B. At the moment this product is not produced. Therefore I can not observe the process in the next days.

C. I haven't evaluated the data from the last measurement and the charts have not been updated yet with the current data.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 3: Starting the Root Cause Analysis

Coach: Which obstacles are preventing you from reaching the target condition?

Improver: The launching height varies, the throwing force varies and the launching angle varies as well.



Coach: Which one are you addressing now?

Improver:

- A. The center of gravity is too far backward. For the next 5 throws we will move the two paper clips further to the front.*
- B. We have to increase the throwing force.*
- C. I will instruct the team members to aim more carefully.*

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 3: Finding the Root Cause

Obstacles: The launching height varies, the throwing force varies, the launching angle varies

Coach: Which one are you addressing now?

Improver: The variation of the launching height.



Coach: And what exactly is the problem?

Improver:

A. Well, the team members always launch each throw at a different height.

B. With this process a constant launching height is simply not possible.

C. The team members never stick to the standards.

D. The body height of the team members varies and therefore they all launch at a different height.

E. I don't know.

Questions for the Coach:

1) What is the problem with each of these answers?

2) What should the "perfect" answer contain?

3) How would you react as a coach in this situation?

Phase 4: Defining the next step precisely

Situation A:

Coach: Which obstacles are you addressing now?

Improver: I don't know but we simply don't hit the target precisely enough.



Coach: What is therefore your next step?

Improver: I will change the position of the clips on the hull.

Situation B:

Obstacle selected: The variation in throwing height.

Coach: ...and what exactly is the problem?

Improver: The team members probably throw each attempt at a different height.



Coach: What is therefore your next step?

Improver: I will tell the team to aim more carefully.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 4: Defining the next step precisely

Obstacle: The variation in throwing height leads to a variation in flight distance.

Coach: ...and what exactly is the problem?

Improver: I don't know but obviously each team members uses a different throwing technique.



Coach: Don't worry. Let's find out quickly. What is therefor your next step to find out?

Improver:

A. I will observe the process again.

B. I will find out why the throwing height varies.

C. I will observe the team members.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 4: Planing the next step precisely.

Chosen Obstacle: *Variation of launching hight leads to ± 12 in variation in throwing distance*

Root cause: *The team members can't recognize the correct launching hight when throwing.*

.....



Coach: *What is therefore your next step?*

Improver:

- A. I will order a fixture that prevents launching below the correct launching hight. Additionally we will add a guid rail to this fixture to limit the lateral launching angle.*
- B. We will define a standard for the launching hight.*
- C. I will train the team members of all three shifts to launch at the correct position.*

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 4: Defining the next step precisely

(A) *Coach: Which obstacles are preventing you from reaching the target condition?*

Improver: I don't know precisely yet but we simply don't hit the target.

Coach: What is therefore your next step?

Improver: I will observe the process more closely to find out which parameters are influencing the flight distance and the cross deviation.

Coach: ...and what do you expect?

Improver: The hit rate will improve.



(B) *Obstacle: The variation in throwing height.*

Coach: ...and what exactly is the problem?

Improver: I don't know yet.

Coach: What is therefore your next step?

Improver: I will observe the process more closely to find out what the root cause for the variation in throwing height is.

Coach: ...and what do you expect?

Improver: All team members will throw at the same height.



Questions for the Coach:

- 1) *What is the problem with each of these answers?*
- 2) *What should the "perfect" answer contain?*
- 3) *How would you react as a coach in this situation?*

Phase 4: Defining the next step precisely

Obstacle: Variation in throwing height leads to a variation in throwing distance of $\pm 30\text{cm}$.

Coach: What exactly is the problem?

Improver: The team members do not recognize the correct throwing height when aiming.

Coach: What is therefore your next step?

Improver: I will mark the correct throwing height with a string put across the launching area.

Coach: ...and what do you expect?



Improver: The variation in throwing distance will be reduced.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 4: Defining the next step precisely

Coach: Which Obstacles are preventing you from reaching the target-condition?

Improver: I don't know yet but we simply don't hit the target.

Coach: What is therefore your next step?

Improver: I will observe the process more precisely to find out which parameters are influencing the throwing distance and the cross deviation.



Coach: ...and what do you expect?

Improver:

A. I know why it is not working.

B. I understand the obstacles.

Questions for the Coach:

- 1) What is the problem with each of these answers?*
- 2) What should the "perfect" answer contain?*
- 3) How would you react as a coach in this situation?*

Phase 2: Checking the expectation measurably

The learning is described imprecise or does not match the expectation:

Obstacle: Variation in throwing hight leads to a variation in throwing distance.

Last step: Observation of the process and measurement of throwing hight for each attempt.

Expectation: We know the variation of the throwing hight and its relation with the trowing distance.



Coach: ...and what did you learn from taking the last step?

Improver:

A. I know what the obstacles are.

B. I know now, why it is not working. We should change the way the team members hold the jet.

C. I have observed that the clips at the wings are different in size and have to be changed.

Questions for the Coach:

1) What is the problem with each of these answers?

2) What should the "perfect" answer contain?

3) How would you react as a coach in this situation?

Phase 2: Checking the expectation measurably

The learning is described imprecise or does not match the expectation:

Obstacle: Variation in throwing height leads to a variation in throwing distance.

Last step: Observation of the process and measurement of throwing height for each attempt.

Expectation: We know the variation of the throwing height and its relation with the flight distance.



Coach: ...and what did you learn from taking the last step?

Improver:

A. I have observed that the throwing height varies quite a bit for each throw of the jet.

B. I have observed that the throwing height varies by 30 cm.

C. It is very helpful to observe the process more often.

Questions for the Coach:

1) What is the problem with each of these answers?

2) What should the "perfect" answer contain?

3) How would you react as a coach in this situation?

Phase 5: Taking the next step quickly

Situation A:

Obstacle: The variation in throwing height.

Coach: ...and what exactly is the problem?

Improver: I don't know yet.

Coach: What is therefore your next step?

Improver: I will do a series of measurements to understand exactly how the throwing height is influencing the flying distance and what is causing it.



Coach: When can we go and see, what we have learned from taking that step?

Improver: Well, to have enough data to draw a relevant conclusion I should at least measure data over the next two weeks. I really don't want to end up with false assumptions here. So let's schedule our next coaching in two weeks from now. Or maybe even one day later so I can put the data into a chart so we can see trends and outliers.

Phase 5: Taking the next step quickly

Situation B:

Obstacle: The variation in throwing height.

What happened so far: The root cause has been analyzed. The operators struggle because they have no indication at which height to throw when aiming. The unwanted effect on the process indicator as well as the correct throwing height have been determined exactly. A solution has been tested (using a string; see exercise #13). Now this solution has to be implemented for good.

Improver: I will observe the process more closely to find out what the root cause for the variation in throwing height is.

Coach: What is therefore your next step?

Improver: I will order a fixture that only allows for launching at the correct launching height.



Coach: When can we go and see, what we have learned from taking that step?

Improver: Well, it will take at least 6 to 8 weeks for our workshop to build the fixture. Then, of course, I will have to test it and see if the process is stable. To be sure that we have a sustainable solution we should at least measure for another 4 weeks. So I think our next coaching cycle should be in about three months.

Learning to hear individual parts 1

„Furthermore, it is my opinion that Carthage must be destroyed“

Marcus Porcius Cato

„Why haven't you put away your dirty cloth again?“

Learning to hear individual parts 2

„In my hotel room there is no electricity anymore“

„This morning we had problems at workplace number 6.
But we can't take care of that right now.“

„I think we should react immediately and call for an expert.“

Learning to hear individual parts 3

„New team members always create big problems during the first 3 weeks.“

„If we don't react immediately this will become a real problem.“

„I have the feeling that the problems with this process
are increasing during the last couple days.“