

Kaizen

15 Hour Basic Course

SESSION 5

TPS Kaizen Course

Instructor's Guide

I. Opening the Meeting

- Welcome participants to session 5 of Kaizen Training
- Create an informal atmosphere. Put the audience at ease. Remind people attendance is recorded but not tests will be given.
- Remember to encourage participation so that the participants will most most benefit from the class.

A. Review of Session 4

- Review the main points of session 4.

Show TP 5 -1 “Review Of Session 4”

B. Explanation of Session 5 Schedule

- Today we will study steps 5 and 6 of the Kaizen process.
- We will finalize & present our material
- Also we review the importance of updating Work Standards and Standardized Work

II. Step 5: Implement the Plan

Show TP 5 - 2 “Basic Steps For Continuous Improvement

After formulating a plan of action for Kaizen, it is now time for implementation. The details of implementation are specific to each improvement idea. However, there are some common points you need to be aware of in conducting changes. I'll try to highlight some of the things you need to be aware of when attempting to implement any type of change.

A. Cooperating with affected employees and departments

No matter how good a plan may seem in theory, we can't say that kaizen has really occurred until the plan is successfully implemented. It is essential at this stage to consider how to involve employees and departments affected by our proposed changes.

We are all working within the organization, and even slight changes can affect others. To successfully implement a plan for kaizen, it is essential to communicate and cooperate. In typical discussion we have to include the Manufacturing Manager, Team Leader, Team Members, engineering staff, and other employees in the upstream and downstream processes, as well as other departments.

Without full involvement from other parties, it may take extra time and effort to implement the proposed changes. If this happens, production may suffer, and this negates the very purpose of seeking improvements in the first place.

B. Provide Guidance to Team Members

Team members often have their work procedures and methods affected by proposed changes. It is imperative to explain to team members the reasons why improvements are being made, and how it will improve production. The easiest way for people to do something is to do it the way in which they're accustomed. An employee's existing work procedures, methods and quality checks tend to become routine. They perform them without difficulty, but tend to not want to change.

Continuous improvement, however, brings a degree of change to these routines. As we discussed in Step 3: Generating original ideas, there are many psychological reasons why individuals tend to resist change, or avoid being creative.

No matter how good the planned kaizen may be, it is unpleasant for employees to be forced to perform new and unfamiliar tasks. They may suddenly be required to use previously unused muscles, and have to think carefully about each individual step, so the whole process is exhausting.

Even though it may be a simple task, the first time using the new method is going to take longer to complete. And it's also necessary to check the quality of the new process, so there may be some resistance to the new kaizen plan by the employees.

So that the team leaders sufficiently understand this, pay particular attention to the following points and provide guidance to their team members.

Show TP 5 - 3 “Provide Guidance To Team Members”

Point #1 Employees need to hear it explained as well as try it out.

Employees can get a conceptual understanding of a task when they hear it explained. However, people are emotional beings; we don't always act on conceptual information. Thus, employees sometimes must be persuaded to accept changes. Work on an emotional level as well as an intellectual level. It's difficult to abandon our resistance to change.

- Provide own example or ask the class

Point #2 It is unpleasant for employees to perform unfamiliar tasks.

As explained previously, employees get uncomfortable when forced to make changes. But saying that “the previous way of doing things is good enough” isn't progress. From Team Leaders, patient guidance and encouragement is required. Without changing the current situation, there is no way to drive continuous improvement in manufacturing.

- Provide own example or ask the class

Point #3 A learning period is needed when a change is introduced.

Work is a combination of effectiveness and habit. No matter how good an improvement may be, employees need some time to get used to it.

Kaizen will not yield results until employees get accustomed to the new work procedures. They have to become acclimated in order to perform efficiently. For employees to learn new work procedures as rapidly as possible, team leaders need to use the methods described in Job Instruction's 4 Step Approach of Prepare, Present, Try Out, & Follow Up. Explain the procedures clearly, completely and patiently, and offer encouragement.

- Provide own example or ask someone in the class

Point #4 Instruct and explain in words that others can understand.

It is extremely important that you give explanations in words that team members can understand, and that you make sure your explanation is understood before attempting to perform the new tasks.

- Provide own example or ask the class

Point #5 Imitation is an effective way to teach new tasks.

When introducing new tasks, you can reduce the feeling of anxiety that is associated with an unfamiliar job through techniques such as demonstration, or by showing a sample using the new procedure. If employees have a chance to see your model and learn by example, they will learn more quickly with fewer mistakes.

- Ask questions regarding points from the above 5 points.

C. Create an Environment that is Conducive to Change

Providing guidance facilitates the process for implementing kaizen. Another important issue is how to get team members to understand and accept the idea that progress always involves change. We need to create an environment which is supportive to change. In baseball, a manager and his coaches need to work together with their players to get the most out of the team. In the work-site, the manufacturing manager is the team manager, the team leader is the coach, and the team members are the players. If they can work together, they can create a pleasant work environment and a strong team.

If leaders create a positive environment and work hard themselves, employees will also work hard and feel good. This kind of lively work environment is creative, and encourages future kaizen activity.

This concludes the section regarding “Implementing new job methods” .

III Step 6: Confirmation of New Method

Show TP 5 - 2 “Basic Steps For Continuous Improvement”

It is essential to follow up after implementing a plan. This tells us how everything is progressing. When asked how a new change is working out, don't be caught saying, “I think it's working out.” Quantify it, get the facts.

Improvements are to no avail if they do not produce positive results. If improvements have not been fully implemented, or team members are not following new work procedures, then it poses a problem. In addition, sometimes problems are only discovered after implementation. Sometimes kaizen succeeds, but not to the extent anticipated.

A. Evaluate Kaizen Results

Sometimes after implementing an improvement, the work conditions change, despite the fact that Work Standards were included in the plan. If the team leader is inattentive, the new method will change, and the situation will revert to the previous condition.

Therefore, it's important not to forget to check the area and contents of the kaizen activity.

B. Approach to Judging Kaizen

When reviewing an improvement, pay special attention to not making conclusions based on impatient judgments. This is true regardless of the evaluation method.

Whatever the kaizen plan, it is not something that will show immediate results. It is important to recognize that it needs time to take root and mature.

Through practice, habits develop, and habits eventually rise to a level of skill. This process of skill building is closely linked to the introduction of new work methods. Therefore, before reaching this level of proficiency, we cannot correctly evaluate an improvement, and cannot fairly compare the old and new methods of doing work.

The employees are skilled at the previous method, but are not yet used to the new way of doing things. So they may simply judge the new way as having no beneficial results, or that it is too difficult to do, and reject it altogether.

With a new job, or when a combination of jobs has been changed, even though the real benefit may not be readily apparent, never abandon the idea. Practice, and consider the time period that the changes have been in place.

When trying to perform in a new job, there is always hesitation. Before the employees experience this mental state, the team leader's understanding, guidance, and encouragement are all necessary to eliminate any anxiety.

C. Comparing Expected Effects and the Actual Results

When judging a result of kaizen, one can not say that the new method is better based upon feelings and other subjective measurements.

It is important for one to know what results the kaizen activity has produced, in comparison to the previously established goals. For example, in the end, how much has unit cost decreased, or to what degree has safety or quality gone up, etc. It is important to make a quantitative judgments based on a solid standard.

For this reason, one should not judge the kaizen results in one large grouping, but rather, evaluate each one as a separate item. In the event that there is a problem, or the results are not as positive as the expectations, one must try to solve the remaining problems, as the next necessary kaizen step.

D. Update Work Standards & Standardized Work

Preventative measures are necessary so that the improved area does not revert back to the old method. These measures take the form of Standardization. Typically the documents we associate with standardization are Work Standards, Job Instruction, and Standardized Work. All of these documents will need to be updated as well as planning for training and providing guidance to employees. Adequately addressing these items as a leader of an area can help ensure that the benefit from improvement activities will not come undone.

E. Discover New Problems & Begin Again

Sometimes it happens that the improvement activities did not produce any noticeable improvement, or the actual results were rather weak when compared to the original expectations. In this case, you may need to start the circle of improvement activities again to solve the remaining problems.

In other instances however, for remaining or newly created problems you may not be able to solve them in a continuous improvement event or activity.

Sometimes when you fall short of your expectations you will need to look at the line as a whole, and look for systemic issues that are blocking your progress.

For example it may be the case that as you implement activities the bottleneck process, or bottleneck machine changes. Usually however, there is only one bottleneck, so by looking to spread kaizen as a *total system* to the entire process, one can limit the effect of these kinds of problems.

As you see opportunity for improvements in Quality, Safety, Cost reduction, Efficiency, Work conditions, etc., take up the challenges one at a time, study them in detail, and make others the goal of the next improvement activity.

IV. Report Out Of Results

So far, we've completed the work place observation, focusing on work element analysis, motion analysis, and time study. And through these analyses, I've asked you to give your ideas about improvements for the area.

Now, we'll have a presentation from everyone regarding their work place observation ideas and results.

A. Summary Of Results For Presentation

In our remaining time I am going to have you finalize your presentation materials. There is a basic format I'd like you to follow. Remember this is a kaizen skills course and not a kaizen event. We are mainly going to have you focus on and demonstrate the skills that you learned in this class.

Show TP 5 - 4 "Presentation Procedure"

(1) Each group will present by themselves, having about 20 minutes each.

The goal of the presentation is to adequately describe the current situation of the area and demonstrate that you have been able to correctly apply the teaching of this kaizen course.

(2) The basic flow of events will be to:

- a. Explain Status Of The Area
- b. Explain Your Analysis & Observation, Using:
 - Work Element Analysis
 - Therblig Analysis
 - Time Study
- c. Explain Your Proposals
- d. Hold Q & A Session
- e. Final Comments By Class Instructor

(3) Preparation of presentation materials

- a. Overall Layout & Explanation Of the Area:
 - Layout Of The Overall Area
 - Layout Of The Specific Cell, Machine, or Station
 - # of Operators
 - # of Shifts
 - Location Of Parts & Material
 - Customer & Takt Time

-Any Problems in Q,C,D,S, etc.

b. Analysis Tools

- Work element sheet
- Movement analysis sheet
- Time Study
- Problem Countermeasure Sheet
- Standardized Work
- Takt Time Bar Chart

B. Actual Presentation

Note To Instructor. Use the last hour of the class for presentations. During presentations pay attention to the following points and comment accordingly.

(1) Presentation

- Did they use all members during the presentation?
- Did everyone participate in the Q&A session

(2) Commentary

- Did they accurately state the current situation?
- Did they demonstrate mastery of:
 - Work Element Analysis Sheet
 - Therblig Symbols
 - Time Study
 - C.T. vs. T.T. & Standardized Work
- How did they arrive at their goals for improvements?
- From what points did they examine their ideas?
- Other advice & praise

V. Conclusion

Over the past 5 days, everyone here has taken time out of their busy schedules to participate in our Kaizen Training Session.

I hope that everyone benefited from this workshop. I enjoyed working with you and learning together. I would like to take a little time now to ask for your impressions of the class.

A. Feedback from participants

- Ask each trainee their basic impressions of the class.
- Aside from their personal thoughts and opinions, the following questions are also appropriate for instructor to ask.
 - 1) Was this training content new and useful?
 - 2) Do you think that you understand the basic way of looking at and thinking about a job site for Kaizen activities?
 - 3) Do you expect it to be easier to continue doing improvement activities now that the Kaizen process has been identified?
 - 4) Do you have a feeling for what situations kaizen is appropriate and important?
 - 5) What was the most useful part of this training class?
 - 6) Do you have confidence that you can lead other employees through the improvement process on the shop floor?
 - 7) Do you have a feeling for what situation to observe a work site?
 - 8) Next time on the factory floor, do you plan to look for a situation where you can try kaizen?
- Express thanks and appreciation for their thoughts and opinions, and encourage them to practice kaizen on the shop floor.

B. The Improvement Process Never Ends

The main reason we implement Kaizen is to secure greater profits for the company and ensure our jobs in the future. We do this by reducing costs and increasing quality, which encourages customers to buy our products.

For this reason, we must continue to maintain and elevate our quality, continue to lower our costs, and supply our customers the necessary parts at the correct time. If we can accomplish this, then our customers will continue to use our products.

It may be necessary at times to invest in new equipment, but by analyzing our organization of production and work methods, it is possible to pursue a

production system which is superior to that of the past. These factors combined with the dedication and creativity of all of our team members will allow us to achieve greater productivity.

One important point to remember is that we need to build trust between employees, and to develop cooperation between people. If everyone lends their ideas and originality, and we use these on the factory floor, everyone will benefit together. As we develop, the foundation of the entire company will strengthen.

There's no limit to human ingenuity. There's no end to the process of doing Kaizen. Simply attempting to maintain the status quo will one day be seen in hindsight as strategy equivalent to retreat.

One can not say that the present situation is the best. Today's "best" is not necessarily that of tomorrow's. If we try to take one step at a time, then the future will be a little bit brighter.

Show TP 5 - 5 "Improvement Process Is Endless and Infinite"

- Explain how attempting to maintain the status quo actually results in decline of the company with respect to competition.
- No limit to human creativity and knowledge, and kaizen is directly connected to drawing upon this knowledge
- It's difficult for a company to continue with the status quo, in this age of rapidly progressing technology
- Even small, every day improvements will eventually have large effects.
- Continual development of the company is a necessary component to improving our lifestyles.

C. Conclusion

- Kaizen is a continuous effort, and requires active involvement
- Words of advice for future Kaizen activities
- Words of appreciation for participating and cooperating in this training course
- Completion of any final surveys, etc.