Gemba Walks the Toyota Way : The Place to Teach and Learn Management

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Published by Mohammed Hamed Ahmed Soliman, 2022.

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First edition. October 18, 2022.

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Dedication

I created this book with the help of more than fifteen different business resources. These academic articles and books are all cited at the end of this book. A number of people have influenced my learning journey and my entire career. I would like to acknowledge them here.

Esraa Soliman: My lovely wife and partner. She encouraged me to write and publish this work. In fact, she always encourages me to do creative work.

Jeffrey Liker: Professor at the University of Michigan and author of *The Toyota Way* and the amazing Toyota series of books. His impressive work on Toyota inspired and influenced my learning about the Toyota Production System. I would really like to thank him for his indirect involvement in this work. Many examples included in this book were originally from his books. Although I have never met Jeff face to face, we have had great communications over social media platforms.

Chris Duklet: A lean manufacturing leader from the United States who works in the field of health care. He has contributed to this work by reviewing the book prior to publication and giving me useful recommendations and advice.

Attia Gomaa: Professor at the American University in Cairo who influenced my teaching career at the university and taught me how to become a good trainer.

Steven Borris: A business consultant, author, and friend from England who influenced my writing career. He encouraged me to write and publish. Steven was my mentor on lean manufacturing, helping me first to understand the basics, after which I developed my understanding through deep practice and self-directed learning.

Eslam Soliman: My friend and a professor at the Assiut University. His PhD is from the University of New Mexico. He has influenced my entire writing career by giving me recommendations and advice on how to write and publish. He revised my published works many times and kept inspiring me after every piece I wrote and published.

Gemba Walks the Toyota Way

The Place to Teach and Learn Management

Mohammed Hamed Ahmed Soliman

What is Gemba?

Gemba is a Japanese word meaning the actual place where value-creating work happens. Many leaders use gemba only for solving problems, visiting only when there is an issue. Others practice gemba walks on a daily basis to follow up and monitor the situation. However, Toyota believes that leaders truly develop through daily experiences at the gemba. In reality, gemba is a principle for managing, developing and improving people and processes. It is a valuable tool that helps lean practitioners learn the true facts so they can base management decisions on the actual situation.

In his book Managing to Learn, John Shook described the gemba as any setting in which individuals are creating value for the customer. This description goes beyond the manufacturing shop floor, which is how most lean practitioners describe the term. By going to the place where work is done, leaders gain firsthand, personal knowledge so they can understand the real situation and what needs to be fixed. Processes cannot be analyzed or understood from offices. Managing performance data from a distance carries huge negatives for leaders, as it could hide the reality of the situation. Leaders who have been at the gemba can make decisions and take responsibility of problem-solving.

Many organizations are developing a standard for their leaders that includes checklists for what should be observed during the gemba walk. More important for every department is to create value for the customer at the gemba by eliminating the

non-value-added work that increases the product price, reduces quality and delays delivery.

Gemba and Solving Problems

Don't rush the solution! Take the example of a fertilizer company that face machine downtime problems. The issue, which involved a poorly performing centrifugal fan, reduced production availability by 20 percent. The fan vibrated a lot and suffered balancing issues. Shutting down the fan for balancing four times in a month cost thousands of dollars in production losses and maintenance costs.

Everyone in the factory believed that this was a direct maintenance problem related to machine balancing, so maintenance should design a solution. Instead of moving forward with that solution, a kaizen team was assigned to observe the situation. After two days at the gemba analyzing the process, the team concluded that the problem was a process design issue. And of the two process issues causing the problem, neither was the fan. The fertilizer company needed to fix the process to eliminate the downtime instead of concentrating on the fan, which kept the issue at the problem-fix cycle. Without real observation at the gemba, the kaizen team could not have realized the true issue.

This example reveals how many problems are hidden and cannot be discovered from reading the performance data. If a machine is waiting for loading, the problem could include having no orders to process, transportation issues, a work-in-process inventory issue or all of the above. Downtime could have associated activities such as searching for tools, searching for spare parts, waiting for operators and other issues. In any case, production wastes need to be eliminated to reduce

lead-times and meet the customer takt time (the customer demand rate). Employees who do the work each day should be taught how to surface these issues in a visual board so leaders can see them and support improvements.

The basic steps of any problem solving process through the plan-do-check-act (PDCA) cycle are:

1. Define the problem relative to the ideal (plan).
2. Break down the problem into manageable pieces (plan).
3. Find the root cause of the problem (plan).
4. Set the targets for achievement (plan).
5. Select the suitable solution from different countermeasures (plan).
6. Implement the plan (do).
7. Revise the outcomes as expected (check).
8. Find out what is going wrong, adapt, adjust, and then repeat the cycle (act).

As you can see, the plan phase is invoked five times before proceeding to the do phase. This is to ensure both the quality of the implementation and that the selected countermeasure will solve the problem. The plan phase cannot be created without a daily observation at the gemba. And finding the root cause of any issue requires a deep observation at the gemba, gathering facts, discussing things with the process operators and developing the best countermeasure from different alternatives.

Unfortunately, many leaders would jump into the do phase without spending enough time observing the situation to find the root cause. The most enjoyable part for the leader is the "do," but jumping to the do means not enough time has been spent on understanding. A quick fix not only might not solve the real problem, it could create wastes in other linked areas.

Lean decision-making assessing a set of potential countermeasures rather than just one approach. This minimizes risk and allows people who do the work to discuss different ideas from a wide range of potential scenarios to implement the best solution, a fix that will solve the issue without creating other problems or wastes. Often, those countermeasures are first developed and taken from different people at the gemba.

After selecting and testing the countermeasures, the continuous improvement leader should draw a Gantt chart and define target deadlines based on the recommendation of people who do the work. Define the rest of the activities, such as who will do the plan, how they will develop the plan, and when and how the work will be done. Finally, assign responsibilities for each deliverable and confirm targets and dates.

In recent decades, the quality issue often has been tackled via Six Sigma improvement initiatives. Six Sigma collects data and runs it through statistical component-correlation, regression and analysis for variation. Even though some output results are statistically significant, in many cases Six Sigma teams don't truly understand what is going on?

At Toyota, rather than immediately turning to complex statistical tools, the genchi genbustu process (gemba) also mean "go and see where the work is done" and other simple analysis tools are tackling the issue of quality. With quality problems, the intention from the gemba visit should be revising the work against the standard, monitoring the operator's work, understanding the reasons by asking the "five whys," benchmarking the process with others, reviewing the standard process chart and updating it accordingly to prevent the error in the future.

Improving the Output of the Gemba Visit

Without clear standards, it is difficult for a manager to get much out of a gemba visit. The more established the standards, the more productive the visit. Companies that want to develop their leaders and managers should use a board for standardized work by assigning cards for each job on the production line, each organized by job number in the area, including a map. The cards should have the following yes-no questions:

- Is the standardized work chart accurate in its times?
- Is the takt correct?
- Is the operator following the steps in sequence?
- Is the operator following the steps in timing?
- Are all the key points being followed?

Each day, the group leader should take one card, pull the job breakdown sheet and observe, looking for deviations from standardized work. Any deviations lead to an answer of "No" and should include a written explanation. The managers also should randomly pick a card each day and do the same thing. In the case of any differences, the managers would go through the job with the group leader. This is highly effective. It assumes you are building to takt and following standardized work, at least to a degree, and that everything is kept reasonably up to date. It's highly unusual for everyone to follow standard work perfectly, so there should be observed deviations that will lead to