

Localizing the Toyota Production System: Training of trainers

Production systems are changing to meet more stringent consumer demand. This forces firms to accelerate the introduction of novel products.

The Toyota Production System (TPS) or lean production system is based on the “pull” production approach, an emerging production philosophy designed to meet customers’ changing needs.


Given the significant role of the TPS in advanced production management, the APO launched an e-learning course on the topic in 2006. That course generated enormous interest in member countries and was repeated in 2007 and 2008. More than 800 have taken the e-learning course. The APO also organized a follow-up project to create the first pool of TPS trainers hand-picked from among outstanding participants in the e-learning courses. The training course on Production Innovation, 1–12 December 2008, in Japan was for 15 from eight member countries who had attended the TPS e-learning courses offered in 2008. It combined a rigorous 10 days of hands-on training and workshop exercises with site visits to some of Toyota’s first-tier suppliers within its manufacturing cluster.

The course kicked off in Tokyo with a refresher module from the e-learning experts followed by three site visits to observe a one-piece flow production line and the just-in-time (JIT) concept in practice. Daikin Industries Ltd.’s Shiga Plant showcased best practices in high-cycle production of air-conditioner compressor units. Contec EMS Co., Ltd., an automobile central processing unit maker, demonstrated human resources strategies and JIT with on-the-job training. At Toyota Motor Corporation’s Tsutsumi Plant near Nagoya, participants learned about the TPS *kanban* (inventory control system) and *jidoka* (automation with a human touch) in the welding process.

Participants then traveled to Nagoya, Japan’s automotive hub, to visit Toyota’s simulation model plant where live production line exercises were conducted and participants experienced the Toyota apprenticeship-style learning by doing with

spot coaching. This was followed by a two-day intensive teardown workshop using the value engineering approach common among Japanese autotmakers for product development at the International Productivity Center, the training center of the Japan Productivity Center for Socio-Economic Development located in Hayama.

Participants found that the program’s methodology and content enabled them to practice the TPS meaningfully at the simulation plant. As noted by a 42-year TPS veteran and now retired Toyota production manager, the methodology used in the simulation exercise reflects the Toyota *jidoka* spirit, under which new employees are observed from a distance by their supervisor, allowed to fail, and encouraged to undertake the necessary *kaizen* or *poka-yoke* (error-proofing) by themselves.

On the ninth day of the course, an examination was conducted covering the TPS concept, practical aspects, and ability to solve problems in operating a TPS line. The exam results included a written report card with detailed feedback to guide participants in further understanding of the TPS. The first pool of trained participants from this project will act as TPS catalysts in their countries and localize the concepts and practices within the context of their industry, work culture, and markets. 



Participants at Toyota’s simulation model plant