

國立中央大學九七學年度碩士在職進修專班研究生入學考試試題卷

考試科目：英文考試

考試時間：80 分鐘

共 2 頁／第 1 頁

With plants in 27 countries, more new factories under construction and workers speaking languages that include Russian and Turkish, Toyota's top executives are trying a difficult balancing act — replicating the company's success and operating principles in other countries while ceding more control to these new outposts at the same time. Such thinking represents not just a challenge of reconciling conflicting goals — to control and let go simultaneously — but also a fundamental shift for Toyota, where senior management jobs are held entirely by Japanese executives, and whose major operations, from engineering to design to strategic planning, remain based in this city about 200 miles west of Tokyo. "It's extremely important to have the same common Toyota Way infiltrated to employees in all corners of the world," said Katsuaki Watanabe, the company's president. "But on the other hand, in each corner of the world, in each region, there are inherent characteristics that need to be respected." For example, Mr. Watanabe has asked foreign managers to assess which tasks they can handle on their own, which they can handle with help from Japan, and which areas Japanese officials still need to supervise.

Toyota needs to act quickly. Next year, it expects to sell more than 10.4 million cars worldwide, double what it sold in 2000. At the same time, Toyota is under pressure to put an end to the recalls of the last three years that have damaged its reputation for bulletproof quality. "As a global company, there are many, many things I believe Toyota has to do," said Fujio Cho, its chairman. "We cannot go back to what we were in the past." Mr. Watanabe said that Toyota had learned, especially through experience in the United States, that it could not simply impose Japanese practices on workers in other countries. It also has learned it cannot spend decades gradually handing off responsibilities. "What took us 20 years is now concentrated down to five years," Mr. Watanabe said. John Paul MacDuffie, a professor at the Wharton School of the University of Pennsylvania, said of Toyota's new strategy: "This is about a greater maturity about globalizing and transferring knowledge." Toyota's expectation that its sales will surpass 10 million next year would put it well ahead of General Motors, which is roughly tied with Toyota for the top spot in the global auto industry. (G.M. has not given its own global sales target, but its sales around the world this decade have grown an average of about 1.5 percent a year, while Toyota's have averaged about 7 percent.)

Toyota sees teaching its production system in the new training center here as crucial to maintaining quality, and reducing the recalls that have plagued the company

in recent years. Such training is essential in places like China, where Toyota found that some of its newest employees had never driven the cars they were hired to build. At Motomachi, more than 3,000 tasks on the assembly line have been translated into video manuals that are displayed on laptop computers above 30 simulated workstations, situated where their functions would be carried out inside the factory. The videos show everything from the correct way to hold a screw to the best way to hold an air gun so that a worker's hand will not tire in a few hours. This month, workers from Toyota's plant in Thailand took part in training required for jobs in their plant's paint shop. Listening as an interpreter translated from Japanese into Thai, the workers were shown how to bend their knees and spray a water gun across a clear panel of Plexiglas.

But new ideas do not apply only to the trainees. At Toyota's Tsutsumi plant, which builds the hybrid-electric Prius, Toyota has overhauled the way it delivers parts to the assembly line. The top floor of the plant, built in 1970, has been emptied and turned into a sprawling parts warehouse. Workers on the plant floor used to choose the parts they needed to install on each vehicle from bins next to the assembly line. Now, a crew of workers upstairs loads the required parts into containers. The bins are placed inside the empty car bodies. Workers need only reach for the appropriate parts. After use, the bins are collected and sent upstairs to be refilled. The process will be part of the operation at Toyota's new plant in Mississippi. It has cut Tsutsumi's labor costs by 20 percent, said Osamu Ushio, general manager for the final assembly division, for two reasons. First, cutting out the need to pick out parts shortened the training time for temporary workers, who make up one-third of the work force at Tsutsumi. Second, older Japanese workers who are guaranteed lifetime employment by Toyota but can no longer handle the physical tasks of building cars can shift to loading containers. That allows Toyota to deploy younger workers, often the temporary ones, who can work faster than their elders at lower wages. They earn about two-thirds of what permanent workers do, or as little as \$10.50 an hour, with few benefits. Said Mr. Ushio: "We have to adapt to the changing environment."

*Adopted from Micheline Maynard (2/22/2008). At Toyota, a Global Giant Reaches for Agility, New York Times.*

### Questions:

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