

The Power of Process: Toyota Mentoring Prepares Students to Solve Problems

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Toyota has long used its know-how to produce the quality vehicles seen on US roads for over 60 years. But in addition to well-built cars and trucks, Toyota crafts quality processes, and these processes are the “secret sauce” of Toyota’s success: just-in-time supply chain, LEAN manufacturing, Toyota Production System, and the foundational decision-making tool, Toyota Business Practices (TBP).

A valuable instrument for shaping any project, TBP is also a boon for helping to shape young minds and sharpening the critical thinking essential to successful problem-solving. Through an innovative mentoring project that challenges students to “start their impossible,” in a nod to Toyota’s inspirational global campaign, students in the Plano, Texas, ISD Academy Program learn to use TBP and supercharge their futures.

A Guide to the Future

Each school year, 100 academy seniors engage in a 12-week project under the guidance of Toyota employees. Managers, such as Chris Tucker from Toyota's External Logistics Group, work with the students at the Academy's Plano campus, located near Toyota Motor North America headquarters, with the goal of exposing them to mentorship, resources and skills.

The program was launched in 2019 by Toyota employee Michaela Sears, Social Innovation Mobility Senior Analyst, to teach high school seniors the first five steps of TBP and how to apply them to different real-world business challenges. "TBP is a fundamental skill taught to Toyota employees to help solve complex business problems," says Sears. "Teaching this framework to the seniors not only adds to their regular curriculum it prepares them for whatever they choose to do after high school."

As business and society continue their rapid states of change, training the next generation of innovators is critical. "Mentorship is extremely powerful," continues Sears. "The learners begin the project unsure and uncomfortable, and after weeks of coaching by their mentors, they exude confidence and are ready to apply TBP to their next project."

Steps to Success

The core curriculum of the mentoring program is the Toyota Business Practices framework, laid out in eight sequential steps. Because the three final steps are based on implementation, the students practice only the first five. Once these steps are learned, understood and practiced, they can be applied to just about any problem in business—or in life.

TOYOTA'S TBP FRAMEWORK:

- 1 Clarify the problem**

Clarify the ultimate goal of the project and/or responsibilities. This includes understanding and assessing the current issue against the ideal situation to identify the gap or problem.
- 2 Break down the problem**

Dissect the problem to identify the prioritized problem at the point of occurrence. You can achieve this by asking 4 Ws: the who, what, when and where.
- 3 Set a target**

Set SMART (specific, measurable, attainable, relevant and timely) targets.
- 4 Analyze the root cause**

Examine the point of occurrence and ponder possible causes without prejudice. Gather facts through genchi genbutsu (go and see for yourself) and ask "why" to eliminate causes that do not materialize, strive for one root cause.
- 5 Develop countermeasures**

Identify as many potential countermeasures as possible. Select the countermeasures with the highest value added and implement a clear and detailed action plan.
- 6 See countermeasures through**

Go the distance. Actively monitor and focus on implementing countermeasures, effectively evaluate and communicate what is and is not working.
- 7 Evaluate both results and process**

Ask yourself, "Did I implement the project according to my plan, and how well did it go?" Evaluating the good and the bad of your process allows for future growth.
- 8 Standardize successes, learn from failures**

Formalizing your wins and drawing from setbacks allows you to look for opportunities to apply your results to avoid future missteps, while also being able to communicate the lessons learned.

Real-World Solutions

As part of the most recent cohort's senior presentation project, Tucker worked with participants to brainstorm possible improvements to the aerodynamics and fuel economy of a 53-foot tractor-trailer. The students tried

their hands at using a blend of Computer Aided Design (CAD), modeling; Science, Technology, Engineering and Math (STEM) skills; and TBP principles to find a solution. The results? Their impossible was *more* than started.

“The mentees’ thinking ventured boldly way outside the box and put forth solutions that weren’t even on my radar,” says Tucker. “It’s amazing. They look at things so differently. They’re two or three steps ahead and really helped with the trailer’s fuel economy.”

In addition to helping to solve concrete problems, Tucker says the mentorship program provides soft skills, including exposure to potential careers and new industries. While growing their professional networks and boosting their confidence and workforce readiness, the high school seniors get a chance to practice these new techniques in real-world simulations.

Develop, Evaluate, Elevate

In its commitment to creating pathways to success and developing a diverse workforce ready to meet the demands of the future, Toyota has pioneered several mentoring and internship programs, such as the Toyota Learning Academy, which brings reading, STEM, and financial literacy curricula to underserved schools, as well as overall skills to help prepare for college and careers. In the Lancaster, Texas, ISD program, 150 teachers and 2,200 students have already participated in the Academy program.

The E3 Engage Mentorship program, also in Plano, serves its mission to engage, empower and elevate students. Over five-plus years, 180 mentors have helped thousands of middle and high school students through courses designed to build a growth mindset to learn how to do and achieve more. Additionally, E3 is now supporting students in West Dallas as part of the new West Dallas STEM School.

The Road Ahead

Toyota’s lens on the future is so much wider than students, families and educators can often access. STEM training, strong logical and creative thinking, plus a readiness to lead are needed to evolve the company and the automotive industry as a whole.

As Tucker attests, “Getting that exposure and experience at Toyota and making key contacts here opens up the opportunity for students to potentially join us in the future.” The program opens the students’ eyes to job opportunities they may never have imagined before.” And that’s a process that’s worth sharing everywhere.