# Explain how you responded to a problem and/or an unfamiliar situation.

What did you do, what was the outcome, and what did you learn from the experience?

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I am known for leading the flag of a small high school in the Philippines to the World Robotics Olympiad in Hungary. However, the challenges behind this success required learning a lot of calculus too advanced for my level and convincing people for financial support. This essay will cover the story of how I led my team to the international stage through plenty of bold, last-minute decisions.

September 5, 2019. Hoops Dome Arena at Lapu-Lapu City, Cebu. I was part of the first generation of Lego EV3 users who represented a Marigondon National High School--a school containing 5,000 students. For the past three years, our robot would always be the last placer on the leaderboards. I was tired of losing and craved the thrill of new challenges. This resulted in me convincing the organizers to switch categories on the day of the event. We broke down the robot we spent months perfecting, and, with our passion reignited, rebuilt it to fit a completely new world that is Robot Soccer. Five minutes to build and code on the spot for the new category. We won 3rd place on that day and qualified for the nationals.

Long story short, in the nationals, my team was banned from playing. The parts used in our robots were compromises since our school was not financially capable enough to provide us with the proper sensor to detect the infrared ball. We, however, continued. Utilizing the other sensors allowed in. We made it to the semi-finals. The following year, we continued the same path and thankfully made it to the nationals again. The only difference was, the community in Lapu-Lapu lent us parts and we tapped into an engineer friend for guidance. He played a significant role in our success by introducing us to the PID Control System: a self-correcting algorithm. This sounds good, right? Wait until you realize it happened a few days before the actual national. I vividly remember the night before the competition proper, we, two timid grade 10 students, had to study a few college-level concepts to hone our bot even more. During the contest proper, we made a few friends in Manila and managed to land 3rd place, securing my team a spot in the finals.

Before the glorious nights in Europe, we were faced with yet another financial dilemma: the money needed to fund our flight and stay in Hungary. We knocked on many doors, hoping for kind hearts to open up. It was a long, but rewarding journey. In the end, the mayor of Lapu-Lapu City, Hon. Ahong Chan came to our aid. A core memory that will forever inspire me and my team.

- Story of how nobodies from a small school represented the PH through plenty of bold, last-minute decisions.

- 2019 - suddenly switch to robot soccer

- 2016 pioneer of robotics in MNHS. Slump, always last.

- Inadequate, school principal was frustrated

- Own goal

- Tried many methods to prep for upcoming nationals

- Ultrasonic sensor + coding

- Light sensor

- IR Sensor for IR soccer ball

- PID Control System introduced, as grade 10 pretty complex

- On the night before the nationals in MNL, understood PID control system and made last minute changes

- We won the nationals and represented the Philippines in WRO 2019 @ Hungary

- Learned must not settle if there is an opportunity for the betterment. When there's a will, there's a a way.