

# Putting Drive into Students Rather than Driving Them

Course Chair Mr Ho Sum Lim shares how Intrinsic Motivation is working out for his Mechatronics and Robotics students.



Mr Ho Sum Lim: "We need to put drive in the students rather than driving the students".

When Diploma in Mechatronics and Robotics (DMRO) Course Chair Mr Ho Sum Lim first took over in 2009, he saw a need to enhance students' performance. Improving grades and lowering failure rate and appeals against removal from the course were some of the issues to tackle.

Mr Ho realised that simply pushing the students to perform better was not sustainable. "In other words, we needed to put drive in the students rather than driving the students," he said.

Mr Ho started implementing changes to the DMRO pedagogy in 2010 and what needed to be changed was based on his "gut feel".

Two years later in 2012, Mr Hee Joh Liang, Deputy Principal (Academic Planning), started the Intrinsic Motivation (IM) initiative and suggested that Mr Ho read "Drive" by Daniel Pink. On reading the book and other similar literature, Mr Ho found that what he had put into practice earlier actually falls into the four aspects of IM – Relatedness, Purpose, Mastery, and Autonomy.

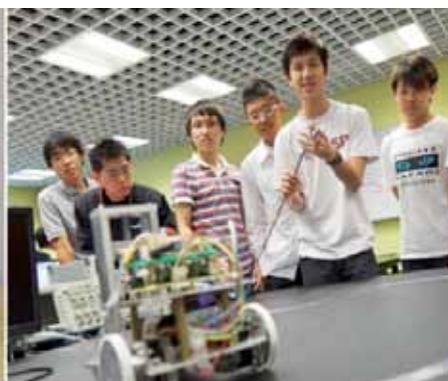
"What we want to do is simply to help students achieve their best, whatever their capability, when they join the course in Year One," Mr Ho said. Better students need to be challenged and stretched. Weaker students, he observed, needed help to restore their self-belief and to create a life purpose

that can be achieved in three years. "The main idea in the pedagogy changes for DMRO is to make learning fun and enjoyable and create a learning space where all these can happen. Learning will be even more effective if a lecturer can also be a friend to the students," Mr Ho said.

The response from students has been tremendous. Mr Ho reported seeing many happy, driven and engaged students in the Academic Year 2010/11 cohort, who graduated in May this year. The impact is most obvious in the students' final year, Mr Ho said. Six out of seven final-year projects from the Robotics Technology Group made it to SP Engineering Show in January 2013 - testament to the high standards achieved by this batch of students.

Mr Ho said that the positive results were due to the collective effort of the course management team. Modestly referring to the first graduating batch of students as "only a very small success" he said that there is still a lot of work ahead. "We need to plod on and look at the outcomes of subsequent batches before we can make any kind of conclusion," Mr Ho said.

In the pipeline are plans to work with Department of Educational Development to conduct another run of IM-related courses for staff teaching DMRO students so that more lecturers can facilitate learning in a way that will create in students a desire to learn. 🔥



Building an Automated Guided Vehicle (AGV) is part of Diploma in Mechatronics and Robotics second-year curriculum. The completed AGVs are put through an Amazing Maze Challenge, effectively promoting play in learning.

## What is Intrinsic Motivation?

Intrinsic Motivation (IM) is a curriculum that promotes motivation for learning and growth mindsets in students. The four aspects of IM – Passion, Relatedness, Autonomy of Choice, and Purpose – aim to help students find their true talent through Purposeful Play, Passion, and Purpose.

Currently, four diplomas are applying the IM framework in their courses: Diploma in Mechatronics and Robotics (DMRO), Civil Engineering with Business (DCEB), Diploma in Information Technology (DIT) and Diploma in Computer Engineering (DCPE).