

Award-winning robot gives autistic kids a helping hand



Members of the King Mongkut's University of Technology Thonburi team pose after their robot design, right, won first prize in the Student Innovation Challenge World 2016.

THANAPAT THONGPAIWAN THE SUNDAY NATION

THE CREATORS of BotTherapist, a robot designed to help autistic children, have won first prize in the Student Innovation Challenge World 2016.

The winning team from King Mongkut's University of Technology Thonburi landed the contest's biggest honour.

"We developed a robot that can be put to real use. It's also an innovation with commercial potential," said Wisanu Jutharee, a member of the winning team.

BotTherapist plays a card game with autistic children to keep them company while promoting learning and social skills.

The award-winning robot was developed based on a model designed by the team's adviser, Assoc Prof Boonserm Kaewkamnerdpong, who came up with an initiative two years ago that addressed the alarming fact that while many children are diagnosed with autism, the number of autism specialists is very limited.

Boonserm believes the robot could help to alleviate the problem.

BotTherapist looks like a friendly toy but is sturdy. It flashes a light to attract the attention of children and has two wheels that allow it to move around.

This robot can make sounds and even "facial" expressions.

Interaction between the robot and children

involves a therapeutic game of matching cards in which a child picks a card based on the same symbol displayed in the eyes of the robot. The child scans the card via a magnetic scanner on the robot and if the right card is chosen, the robot displays a happy face and plays music, giving the child encouragement.

If its face turns sad, the child has picked the wrong card and the robot encourages the child to try again.

The robot was tested interacting with 12 autistic children at Ramathibodi Hospital.

"The results are satisfactory," Wisanu said.

Dr Nichara Ruangdaraganon, who works at the hospital's developmental-behavioural paediatrics division, said autistic children were interested in BotTherapist because it moved, flashed a light and made sounds.

"I really hope that this robot can be upgraded further so that it can become a tool in the therapy for children with special needs," she said.

Wisanu said his teams planned to develop more therapeutic games for the next version of the robot.

"Our team is in the process of seeking a patent for BotTherapist," he added.

The Student Innovation Challenge World is an annual event held at I-CREATE, a platform to help people with disabilities in Asean through rehabilitation technologies.