

ADC Reflections – Robotics

The series of challenges designed for the teaching and learning of robotics can be modified to be delivered through the protocols for at distance control. In a practical sense however, there are a variety of issues which significantly reduce the success of the programme overall.

Problems encountered:

The protocol works on a version of robotlab that I don't, and hadn't, used. I had to relearn how to do some of the programming steps using a different version of the programme. Not a major problem!

There were technical troubles along the way allowing access to the host school computing network, once again not major, but annoying.

Lack of confidence by teachers in the client school meant they were much more comfortable when I was present at the school to help the students if they needed further guidance through some of the steps. If I remained at the host school, it became very difficult to guide the students through ideas for solving the challenge. If I left the host school to help the students the availability of the computers disappeared!

Availability of computers at the Host School was a major issue. On our campus there are approx 220 students in years 8 and 9. There are only two computer rooms available and these computer rooms are heavily booked and are not generally available for use by other schools. I got around this problem in the first instance by generating another computer room using older computers designated for the recycle bin and then using wireless network to allow remote access. This was sporadically successful, as the reliability of connection was not high and I needed to be in two places at once!

The overall reliability of the internet- while we take this for granted, there were often times that we simply couldn't log into the host computers because there was some problem with connection. Band width to the school had been increased at the beginning of this project, but I still believe it was too narrow to cope with all the traffic generated at the school. This is also compounded by the links which exist between the two campus of the school.

Comments:

While the concept of At Distance Control works, it would not be how I would choose to teach robotics in the future. The programme is far more successful through the hands on approach where students get to run their robots and get immediate feedback.