**PRELIMINARY BACKGROUND INFO**

I am looking to get your support in programming one or more robots to assist me with classroom administration and supporting student activity.

Specifically, I would like the robot(s) to assist with:

* welcoming students to the class and tracking their attendance
* interacting with students in the delivery of a range of tutorial exercises
* tracking the activities and results of students throughout each lesson
* storing a record of these various details for review, reporting and statistical reporting purposes; and
* for planning future class exercises, activities and preparation.

Suggested Research Aspect:

Possibly as part of the interview/meeting, you could complete and document findings on possible robots currently on the market that might fit my requirements. Cost of the robot might be mentioned as one of the factors to be considered.

Some options are:

* Nao
* Buddy
* Plen2
* Zenbo (Asus)
* Jibo (non-mobile)
* Baxter

Hardware (for a web based database application):

* Need a web server or web hosting for this – Windows-based, SQL Server, ASP.Net (or equivalent).
* Data to be received by the server database from each robot via a wireless connection at the end of each lesson, or when the teacher makes an upload request.
* Interface components to be developed for user access via computer tablet, laptop or PC

Software (for a web based database application):

* Windows-based software - SQL Server, ASP.Net.
* Database needs to receive data from the robot via a wireless connection.
* Screens required include (but not limited to):
  + a data entry screen for adding / editing student details
  + attendance for a given lesson / day in a tabular format
  + a data entry screen for adding / editing the various student exercises.
  + a menu for the various reports - these need to be viewable via the computer tablet.

No other specific third party software required.

People:

* I will be the sole user for the initial trial period, but other teachers may wish to utilise the system once it is up and running.
* I am considering two robots initially, but may be extended to 4 ongoing. If other teachers wish to utilise the system, they will need their own robots.
* It would be good to centralise all data from all robots – potentially allowing for additional management reporting across the school.

Processes:

* As students enter the classroom a robot recognises the student and welcomes them to the class.
* At the same time the student’s attendance is noted.
* During self-directed student sessions – within the class during the day - each robot will run through a sequence of interactive exercises with individual students. These exercises will match the current classroom work-type and topic.
* Exercise Types would include, but not limited to: reading, writing, mathematics.
* Exercise Topics within each Exercise Type might include: reading level 1, level 2, etc., writing words, constructing sentences, arithmetic, times tables 1, times tables 2, fractions 1,...
* At the end of each lesson (or as otherwise requested), the data for the lesson will be wirelessly uploaded to the web server, making it immediately available to the teacher via their computer tablet or laptop interface.
* Teacher, Class, Student and Robot details will be added and edited via the teacher’s computer tablet or laptop interface.
* The various reports can also be accessed via a menu on the teacher’s computer tablet or laptop interface.

Data:

* Data requirements are as per the sample forms.
* Anticipating up to 50 teachers may wish to utilise the system. Allow for about 10 new teachers per year.
* Each teacher would have at least one but could have many classes. Allow for 100-200 classes per year
* Each class could have up to 30 students
* If all teachers eventually decide to utilise the system, details of up to 200 robots could be stored.
* There could be 10-20 exercise types, 10-20 exercise topics per type, and 10-20 exercises per topic.
* Each Exercise could have 10-20 items (questions / activities / etc).
* Attendance would need to be recorded (present or absent) for all students for all classes throughout the year for all teachers.