MULTI-TOUCH TECHNOLOGY FOR THE CLASSROOM

Engineering and Physical Sciences Research Council | Case study 33

Long gone are the days of ‘chalk and talk’, but an EPSRC-funded project at Durham University may herald the next big change in the way our children learn in the classroom.

The interactive whiteboard allows for a certain amount of pupil involvement, but research into new multi-touch screen technologies could put an interactive screen on every child’s desktop.

**IMPACT ON PUPILS**

Research shows that increased opportunities for students’ involvement in the classroom and collaborative activities are likely to improve attendance, attention and engagement in learning.

Easy movement between class and group activities, increased opportunities for competitive and cooperative working, and greater capability for unobtrusive monitoring of how group work is progressing.

**SynergyNet**

Most people will be familiar with the touch screens used in everything from mobile phones to ticket kiosks. But whether that’s just for push button responses or more advanced ‘gesture’ recognition, current devices only recognise one touch at a time.

New multi-touch technologies which can sense simultaneous input by several fingers or pens is now being harnessed for use in the classroom. That’s because several fingers means that two or more pupils can work on a single screen at the same time.

Now a collaborative project (SynergyNet) between Durham University’s Departments of Computer Science, Education and Psychology, led by Dr Elizabeth Burd, is harnessing that fact to develop a new generation of classroom-based activities which can be supported by this technology to move between class, group and individual learning activities.

The idea is that a single large multi-touch desk can serve either as a set of individual digital work spaces or a single combined workspace in which pupils can cooperate on a task.

But moving from the traditional single user keyboard and mouse to multi-user simultaneous input requires a radical re-design not only of the user interface, but of the classroom environment and the way in which lessons are conducted. As an example, researchers think that multi-touch on embedded desks will help the engagement of older or more reserved pupils who are less likely to leave their desks to move to the front of the class, and for maintaining engagement of the whole class at times when the demands of an individual pupil threaten to slow the lesson pace.

It’s early days for this new technology, but the researchers vision is that all students will have direct access to this technology at all times, on screens embedded within learners’ desks. But they also make it clear that development of new software that uses multi-touch will be driven by what actually works for both pupils and teachers.

For more information about EPSRC and the impact it is making visit www.epsrc.ac.uk

Team work

In 75 percent of the groups using traditional methods, each member worked independently of their team-mates, but all groups using the new technology worked collectively to solve the problem.