



partnerships for schools
building schools for the future

This case study looks at the nationally recognised collaborative project between Teddington School and Cordless Consultants which is giving students and staff an opportunity to fully test a range of technology solutions, furniture and learning spaces which could be used in their new BSF school.

Key project information

School: Teddington School

No of pupils: 1,150 aged 11 to 16

Specialism: Visual Arts

Joined BSF: 2006 as a One School Pathfinder

School complete: 2010

Architects: BDP

ICT advisers: Cordless Consultants

Local authority: London Borough of Richmond

Teddington School's technology Pilot Zone

Project description

At the start of their BSF project Teddington School began by asking the fundamental questions: 'What curriculum do we need to deliver?' and 'How can we best deliver it?' This addressed, the school was then able to begin to develop an understanding of the physical environment that would be required to achieve these objectives effectively.

It was very clear to school leaders that if they were to provide a transformational learning agenda, a curriculum appropriate to the needs of young people in today's society, as well as providing personalised learning opportunities, then it was vital that ICT lay at the heart of the school's design, the infrastructure and the environment. Cordless Consultants were appointed to work with Teddington School on this task.

After visiting a number of new school buildings the school realised that in many cases ICT had only been addressed towards the end of the Design and Build programme, almost as an afterthought. In these cases

there was an evident lack of integration between ICT and both the physical and educational environment. Given the great wealth of technological resources available to schools in the 21st century, this felt like a lost opportunity, and one that Teddington School was anxious to avoid.

Cordless put forward new ideas and cutting-edge solutions that will allow teachers to challenge how ICT is used in schools and develop new ideas for learning environments.

Before purchasing equipment and putting ideas into practice the school wanted to see exactly what educational technology was available to them, and then, crucially, to trial it in a teaching and learning context. This is when the idea of the Pilot Zone - a kind of technology learning laboratory - came into being. It is not a classroom, more a learning space where a variety of technologies, interacting with the space and various furniture types and styles, can be trialled with staff and students. It provides a unique opportunity to test new ideas and concepts.

Teddington School's technology Pilot Zone

The role of ICT in the design of the new school

In designing the new learning environment, the Teddington School team has placed a significant emphasis on the role of ICT to ensure that the curriculum and its delivery are both transformational and meet the varying needs of all its learners.

The new school building, designed by an interdisciplinary team at BDP, will help transform the way that lessons are taught and pupils, staff and visitors experience their environment. The vision for BDP's design solution is to create a building that will meet the school's educational objective: that learning should be transformational and aspirational.

The team looked at the current ICT challenges, and also the objectives for ICT in the new school.

ICT: challenges

Historically ICT had evolved, often bolted on to the existing infrastructure

Standard classrooms were inflexible as dictated by the previous traditional school design

The physical teaching environment often restricted the creative use of ICT

There was limited ICT available in subject areas

ICT: objectives

ICT should be in balance with learning and enable integrated thinking

All future discussions about the design of the school should have ICT at their core

Learning should take place without confinement

Transform traditional teaching methods

Create a space where qualitative judgement can be made before any purchasing takes place

Use ICT in a more creative way and identify different ways for students to explore concepts to enable more thinking and interaction

Bring new technology into the school in a way that will stimulate and excite staff and learners alike

ICT should pervade all areas and should be used across the curriculum

The Pilot Zone

Teddington School, in conjunction with Cordless Consultants, decided to set up a Pilot Zone within the school to test new ICT facilities, to help staff and learners get to grips and experiment with new cutting-edge technologies, and to gather feedback from users so that improvements can be made before the full ICT transformation takes place across the new school.

The mission for the Pilot Zone - and, in turn, the new building as a whole - is to take away any inherent fear of technology and new ways of teaching, and in so doing to win hearts and minds and provide support for the new approach.

The Pilot Zone gives staff an opportunity to adjust to using the new environment, and familiarisation sessions are being rolled out to students. By experiencing the diverse and innovative range of technology first hand, staff and learners will be fully engaged and involved in the transformation of their school.

Within the Pilot Zone, Cordless Consultants asked leading manufacturers to put forward products and solutions to transform the learning environment, teaching methods and use of space in the school.

Teddington School's technology Pilot Zone

Technologies on trial in the Pilot Zone

The technologies that Cordless have put in place are much more than 'work tools', they are transforming the way in which lessons are constructed and how students are taught. The technology being trialled in the Pilot Zone includes:

An **interactive whiteboard** and a **voting system** from Promethean which means that all students can have a voice in the classroom. The devices also enable feedback to the teacher and the technology records students' results which can then be saved for assessment. Furthermore they allow teachers to instantly monitor students' progression and assist in targeting students' individual needs.

Laptop computers will be made available for staff and students in the school, to allow flexible, mobile learning. Those used in the Pilot Zone include Toshiba's latest models ranging from laptops with dual functionality which transform into a touch screen, to more thick-skinned laptops that are designed to be tough and secure and to take a few knocks. RM's Mobile One Notebook is designed to withstand rigorous stress within a school environment (with a spill and splash proof keyboard as standard). Students are able to use the Notebook in areas of the school that might previously not have been practical, thus bringing IT into all subject areas and all classes.

A state-of-the-art **sound system** from Bose changes the way students learn with the use of enhanced speech and recorded material, via microphone or CD and supporting visual resources. This equipment offers students increased access to recorded material via iPod and CD/DVD.

Alongside the sound system, Cordless identified **wireless headsets** from Plantronics which enable students to work with music, take telephone calls, connect to the PC and allow peer-to-peer communications. This also allows for the exciting possibility of distance learning with other schools via webcams and video conferencing.

Camcorders have been supplied by Toshiba and are used for a variety of classroom applications, from creating movies for arts and media projects to diagnostic sessions in PE classes. Also by combining camcorders and **webcams** with chroma key backdrops interactions are supported between pupils in a variety of virtual environments across the curriculum.

Large **flat screen displays** from Sony and Toshiba allow students to view quality still and moving images. Both fixed and moveable versions allow the focus of lessons to move to different areas of the room.

The space in the Pilot Zone is designed to be a clutter-free, flexible, modern environment which enhances learning. The psychological impact of the new space is profound, enabling students to take pride in their environment. Perhaps above all the choice of facilities and furniture 'de-institutionalises' the classroom and supports active, autonomous and flexible learning.

Teddington School and Cordless are using the Pilot Zone to trial various **digital signage technologies**, including Sony High Definition LCD Displays. Digital signage will be extended throughout the school to improve internal and external communication whilst reducing the amount of paper waste associated with traditional methods of signage and information sharing in schools. One cheap, effective signage solution in place is digital photo frames which can be used for a range of purposes, from showcasing students' art to providing information and updates to students and visitors.

Furniture testing in the Pilot Zone

Alongside the ICT, Cordless have worked with leading edge furniture manufacturers Kinnarps and Steelcase to develop furniture solutions which enable staff and students to use space with complete freedom. Examples include **flexible desking** and seating with **touchdown tables** and high stools; **e-desking** (benching around a wall); improved cable management; mobile white board workstations, standing height tables; lockable storage seating and a large plectrum shaped table for collaborative work.

Recent advances such as the slimming down of PCs have seen the presence of IT equipment recede and cease to dominate the space. Cordless worked with Viglen to install PC models designed specifically for the education market.

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Feedback and next steps

One of the aims of the Pilot Zone is to allow Cordless and the Teddington School project team to evaluate and improve on the ICT available. The gathering of feedback about the products and experiences will be actively undertaken to help the school and its advisers learn and to shape the new environment. Staff and students will be required to fill out an evaluation form, and a local authority employee has been seconded to carry out formal qualitative and quantitative evaluation.

The response of the students will influence and inform the future of the building and what is used within it.

Staff will be able to fully explore all educational opportunities offered by the technology and make the right decisions for the future of the school.

Part of the brief for the project is to work with the Local Authority to help other schools learn from Teddington School's work.

The Pilot Zone will be made open to other primary and secondary schools who will be able to come and use and evaluate the products in the space when looking for equipment. The Pilot Zone brings to life what was just a square on the plans or an image in a brochure.

"From day one, students have enjoyed working in the room, and we have seen a variety of subjects and teaching styles employed there in its short lifetime. Classes have moved and adapted furniture to suit different learning styles and lesson delivery. I've noted group interactions are really positive in the space - students are focussed when completing tasks - they often choose for themselves the most appropriate space for their work, as well as making critical and informed choices regarding the technology.

"Leading academic Professor Stephen Heppell who visited with a film crew praised 'the excellent Technology Pilot space with a host of interesting explorations of furniture'. It is becoming evermore clear that the key element in enabling transformational learning is the interaction between ICT and the flexibility of furniture systems. Staff are developing and extending their repertoire of teaching skills using the room, and a sense of e-confidence is being fostered as a result."

Kevin Watling, Assistant Head Teacher & Project Director

Key contacts

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