The College of Law's 180-seat lecture theatre, in which a TeamMate Tutor lectern is a key teaching aid for professors and guest speakers

Tools for schools

The use of a-v in the education market is becoming a must-have feature. There are both opportunities and rewards to be had by providing teachers with new tools so that their students can find lessons more engaging.   reports on a range of different projects

TECHNICAL UPGRADE FOR IMPROVED LEARNING
COLLEGE OF LAW

The College of Law, with a network of six colleges around the UK, has updated its a-v to improve presentations and teaching. Working with systems designer Reflex, the college first upgraded the 180-seat lecture theatre at its Chancery Lane campus.

A TeamMate Tutor lectern was installed into which was built all the required a-v technology and PC/laptop network access. Additional equipment includes a DVD/VCR, an amplifier and an AMX 16-button control system built into the lectern. This allows the lecturer to turn all the equipment on and off or switch from one media to another at the push of a button. A Smart Sympodium interactive tablet gives lecturers the ability to interact with the material displayed on screen.

The job was completed with an amplifier, gooseneck microphone and Elmo 5600 document camera which allows printed material to be shown onscreen and displayed to a large audience.

Reflex also installed an Epson EMP8300 projector into the ceiling for the projection of source material to a main screen. Two 42in NEC plasma screens act as relay monitors. Existing classroom projectors were replaced with Epson EMP83 projectors for standardisation and future networking capabilities.

In the college's 12 training rooms for its Bar Vocational Course, Reflex installed 40in LCD screens along with cameras, DVD recorders and boundary microphones.

The college also has 40 oral skills rooms where video assessments are recorded using Panasonic camcorders linked to a VHS/Combi TV for its Graduate Diploma in Law and Legal Practitioner Courses. The college was unhappy with the poor sound and picture quality and decided to upgraded from VHS to DVD, improving the audio quality and playback facilities. The oral skills rooms also had 30in LCD screens installed along with DVD recorders and boundary microphones.

Finally, the college's reception area now informs and entertains teachers, students and visitors with its digital signage.
www.college-of-law.co.uk
www.reflex.co.uk

The College of Law's lecture theatre »

UNIVERSITY OF SHEFFIELD

The University of Sheffield's Advanced Manufacturing Research Centre (AMRC) decided to put wheels on its aerospace project to get it closer to people by building a roadshow vehicle. The AMRC — a multi-million pound collaboration between the university and sponsors including Boeing, Rolls-Royce, BAE Systems and the Government — specialises in research and technological innovation within the aerospace industry.

The university chose Event Marketing Solutions (EMS) for the three-year contract to build and manage the technically advanced vehicle.

A key attraction on board will be a 3.5-ton, machining centre from global machine tool company Mori Seiki. This dramatic centrepiece will be permanently housed inside the unit, which has had to be specially adapted to bear its weight.

A special camera will be mounted inside the machine and images of its precision workings will be shown on a plasma screen to visitors. The 13.6m vehicle will also include a virtual reality room, using technology that enables visitors, wearing individual headgear, to 'walk' around the inside of an aeroplane's engine.

V&A's digital studio inside its new Learning Centre which also boasts an art studio and an auditorium

PUBLIC LEARNING THROUGH CREATIVE DESIGN AND THE ARTS
VICTORIA & ALBERT MUSEUM

The Victoria & Albert Museum has opened a Learning Centre, which works both as an independent arts centre and as a gateway to exploration of the wider museum and learning for the general public.

Planned over three years, the £4m project is located on Levels 0 and 1 of the Henry Cole Wing. The V&A has now 1,762m² allocated to educational use, more than double the original space. AV consultancy firm Arup was involved in the plans from the start and advise on what the centre would need to educate and engage with its visitors. David Lakin, Arup project manager, who managed the AV/IT constancy appointment for the last 18 months of the project, explained that this is just a part of the V&A's planned update.

The centre boosts spaces such as a digital studio, art studio and an auditorium, as well as the residency studios. It provides a place for debate on the current issues of design and its place in society, alongside opportunities to learn new skills, both digital and traditional.

The Sackler Centre is focusing on digital and a-v technologies to enable visitors to be inspired by the museum's collections, building, spaces, people and online presence. Although technology is pervasive through out the centre, it has been designed to be visually unobtrusive. Its focus is on creative outputs and information rather than as massed hardware.

Jo Jones, web content manager and member of the V&A's project team, says: 'Digital technologies can allow visitors to completely redefine their museum experience and are now an integral part of how we communicate with our various audiences.'

Museums are moving into a world where permanent connectivity and interactivity offer new challenges for looking at and engaging with static objects and displays. Enhanced a-v facilities also offer opportunities and challenges for widening the scope of practical activities.

A large reception area and information point welcomes and advises visitors at the Learning Centre. This is also a public space for displaying works of participants in onsite and outreach programmes, alongside works from the collections.

A key feature of the Sackler Centre is its auditorium. Capable of seating approximately 140 people for conferences, courses and performances, the auditorium includes a Panasonic HD projector, surround sound and a wall-mounted Dalite screen (24x18in). The theatre can record and webcast live events using a pan tilt camera from Panasonic. A similar setting can be found in the smaller lecture room. AMX control panels manage all a-v and lighting. There is also an induction loop and a Mini mixing desk for translation.

Other areas of the centre includes: an art studio with capacity for 35, two other studios for artists, designers and craftspeople in residence, and a digital studio equipped with the latest technology, used both for structured courses and independent investigation, accommodating 35.
www.vam.ac.uk »

SERVICE CHILDREN'S EDUCATION

Imagine an education environment with 700 teachers and 10,000 pupils. Split that between seven time zones, nine countries and 45 schools. Now add the complication of most of those pupils moving between schools at least once every four years. Such are the difficulties that Service Children's Education (SCE) encounters when trying to provide core curriculum education for the children of military personnel serving outside the UK. To resolve the issue, the SCE has invested in videoconferencing systems provided and installed by Impact Marcom. With locations from Naples, Italy to Belize in South America, Impact Marcom designed a system, based on an IP network, that gives all the sites — regardless of location and technical capabilities — simple and secure access to the videoconferencing platform. The network should eventually extend its reach beyond the 45 schools to, potentially, all 700 teaching staff. With the planned delivery in 2009 of laptops to teachers, the videoconferencing technology can be implemented as a simple PC desktop package giving video and audio communications via web-cams using any available internet access.

Steven Wallace, ICT manager at SCE, says: 'The beauty of this system is its simplicity. It is much easier to use than we imagined, yet the quality is better than we ever believed possible. We are now starting to use the Tandberg videoconferencing equipment for curriculum work. It was originally designed for in-house management but we have been so pleased with the results that we have now started videoconferencing classroom activities.' The project won AV's videoconferencing award in 2008.
www.impactmarcom.co.uk

SEEING THE BIG PICTURE WITH CLASSROOM OF THE FUTURE
NOTRE DAME HIGH SCHOOL

If you want to know what the education environment of the future will look like, you won't need a time machine. Notre Dame High School in Norwich claims to have created a 'Classroom of the Future' in its science lab. Following a successful grant application to the Department for Children, Schools and Families (DCSF) for the project, the school has developed a sophisticated eco-environment incorporating a multi-purpose laboratory, complete with a-v infrastructure.

LSI Architects masterminded the conversion of what was formerly a library in the Lady Julian Building. And the school's IT core support team, headed by IT services manager David Whitworth, turned to local a-v integration company, Snelling Business Systems, to implement a futuristic vision by creating a digital network in which science students could interact with a 100in dnp Supernova One optical front projection screen.

Snelling MD Toby Wise says: 'The school wanted a wow factor. When we looked at the architect's plans and saw the drop-down screen, it was obvious that with the high ambient light level — caused by the big sash windows — a high output projection would have been required.

In the end we decided that a high-contrast front projection screen would offer the most cost-effective solution. The Supernova screen's y f deflecting ambient light enhances the colour and contrast of the image.'

The classroom houses f projectors, one at either end of the room, one addressing the active whiteboards and one driving the verti projection In addition to tuking feeds from up to 32 laptops, they will also be addressed by conventionul playback devices — and the microscopes and visualisers of the future.

The new science lab accommodute 70 desks at its full extent or be divided by a f 'We have as which film what is g on in the other room and which is g fed back to the main projector,' says Whitworth. The need f visual acuity inside the lab matched by the futuristi eco-vision in the garden outside, where a

biosphere, wind turnbine and solar panels have been incorporated.

Tim Mullis, head of science at Notre Dume, believes that Supernova will encourage new teaching methods.

'Having a far bigger screen with this degree of contrast lets us display more images,' he says. 'Students operating a laptop can work on the screen

LONDON METROPOLITAN UNIVERSITY (LMU)

London Metropolitan University (LMU) started the new term with 83 of its classrooms kitted out with projectors and interactive whiteboards. The project was installed by Touchvision, a-v supplier and a part of the MediaZest Group.

Using a red-amber-green control screen, the university's technical support team can instantly see when and where an individual piece of equipment in any classroom has a fault. The result is an improved educational environment for students and staff, with the reduced cost of technical support and administration. LMU ranks as London's largest unitary university, with more than 34,000 students, including almost 7,000 international students from 155 countries. The a-v equipment has been installed at five key sites at the North Campus, near Islington. Each room has a projector in the ceiling and an a-v desk with PC, DVD player, amplifier, lectern microphone, document visualiser, infrared for the hard of hearing, and a control system.

Mark Bardouille, LMU project manager, says: 'By increasing the amount of equipment in each classroom, we have reduced the time staff have to spend moving it from one place to another. We've also increased security by reducing the potential for damage or theft.'

Another benefit Bardouille highlights is that technology use has increased now that it is in a more fixed, controlled and safe environment. 'And the consistency of a-v systems across the campus makes it more familiar to staff, reducing

training time,' he added. 'The student experience is also enhanced by having introduced more advanced technology into classrooms.'

After going out to competitive tender in December 2007, the university awarded Touchvision the £800,000 contract to design and install the system. 'Touchvision was able to offer a level of experience and expertise, demonstrating how it would ensure safe working practices in line with university regulations,' says Bardouille. Each classroom was reviewed and tailored by the Touchvision team, which then produced a detailed schedule of the project rollout. However, not everything was straightforward since a big part of the work had to be done during teaching periods. The installation is now completed and fully operational.
www.mediazest.com

LMU has upgraded 83 classrooms

and, used in conjunction with a whiteboard, we can display things such as the periodi tuble that we couldn't have done before.

'From being a rather drab school room this now has a new lease of li e.

'It also allows us to show elements that are too small or too large to bring into the lab — for example, we have a simulation of all the satellites that are in orbit around the Earth in real time. On a television it would just be a blur of dots.' The school has since won a further grant from The Wolfson Foundation for data logging equipment and tutorial-driven experiments. Part of this grant will be allocated to the new mi roscope, which will plug into a computer and project the enlarged image on to the Supernova.

Whitworth says: 'In time we will also introduce videoconferencing, but it's important to progress at the right rate and not try to grow too quickly.'

Notre Dame High School can today support around 500 PCs, 100 laptops, 80 multimedia projectors and 25 interactive whiteboards among its facilities — all combined into one network. It is also linked into the county's Joint Academi NETwork (JANET), a Government-funded internet research network dedi ated to schools■

www.rearpro.com
www.eventms.com
www.amrc.co.uk

Notre Dame High School classroom with its newly-fitted 100in dnp Supernova projection screen