

Specialist Colleges Innovation Fund Projects  
Summary Report

Glenaffric Ltd  
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## 1. Introduction and Context

Specialist Colleges offer inclusive further education for the widest range of learners with learning difficulties and or disabilities. They are often small and focus on particular types of student intake. Almost all of the colleges offer extended curricula and have a high proportion of residential students, some of whom require very high levels of care. They are diverse institutions, having markedly different organisational cultures and management structures, and are reliant on multiple funding sources for the provision and development of the wide range of services they provide.

In 2004, the Learning and Skills Council (LSC) allocated funding for a programme of developments to improve the experience and use of Information and Learning Technologies (ILT) in Specialist Colleges, and to encourage the sharing of the expertise with students built up in the sector. The format of the programme was proposed by a group including representatives from Specialist Colleges. The management of the project is being provided by TechDis from October 2004 until at least July 2007. All Specialist Colleges have been invited to submit an ILT Strategy and to apply for funds to develop activities in support of their strategic plans in this area.

In 2005, the JISC Organisational Support committee (JOS) also approved funding to support Specialist Colleges with specific innovations in the development and use of online learning materials.

TechDis has implemented processes for the disbursement of funding and the management of development projects in the Specialist Colleges to maximise the benefits of both sources of funding for the colleges and for the sector. The two funding sources were combined to enable colleges to bid for support in three broad areas:

- Content – the innovative use of national content resources
- Technical – the innovative development of equipment and/or infrastructure
- Content + Technical – a combination of technical innovation and the use of national resources.

A total of 27 projects, based in 22 Colleges, have been awarded funding ranging from around £2,500 to over £11,000, with an average of around £11,000 going to each institution involved in the projects. All projects were scheduled for completion in July 2006.

The TechDis Specialist Colleges co-ordinator has led a team of curriculum specialists to visit the project colleges, offering guidance on the use of resources and advice on further developments in support of the college ILT strategy.

TechDis has commissioned Glenaffric Ltd e-learning consultants to coordinate the review of the projects, support the work of the curriculum specialist teams, and develop key reports to meet the needs of various stakeholders.

## 2. Approaches

### 2.1 Project plans

Given the diversity of the project institutions and the relative inexperience of some in terms of externally funded projects, the need for a relatively light but nonetheless consistent and robust approach to project management and reporting was identified at the outset.

A project plan template was developed and circulated to each of the project colleges in early 2006. The purpose of the document was to encourage colleges to reflect on and articulate the aims of the project in practical terms, the key stages in project development, the people involved in the process, the anticipated benefits, and the role of the project in the wider developmental context of the college.

The completed plans also helped to highlight key issues for exploration during project visits and ongoing support.

## **2.2 Visits to projects**

One of the key elements in the support provided by TechDis was a programme of visits to each of the projects offering specific support and guidance on the development and implementation of ILT strategies.

A briefing document was produced for the colleges explaining the scope and purpose of the project visits, including the intended benefits to them and the projects, and outlining an indicative schedule. A reporting template was also developed for use by the TechDis team to ensure a consistent approach to the gathering and analysis of information. This included information on the background and context for each institution, including its location and setting, brief recent history and socio-economic context. Information was also sought on college size in terms of staff and student complements, main specialisms, funding arrangements and management structures as well as the provision of IT resources, technical support and ILT-related staff development. While not an exhaustive survey, this process has provided a snapshot overview of these issues across a range of specialist colleges.

The main aim of the visits was to discuss progress with ILT and infrastructure developments and offer support to the colleges. They also provided an opportunity to view some of the project activities and developments. The team highlighted some of the key issues of interest from each of the visits, and identified areas for further development and support.

## **2.3 Reporting**

An interim report on project progress and emerging issues of interest was submitted in February 2006. A report was also presented to the NatSpec conference in May 2006.

The aim of this Summary Report is to offer a brief synopsis of each of the projects in terms of the background and main drivers, aims and objectives, progress, challenges encountered and the benefits that colleges have identified. The report also highlights key findings, areas of good practice and issues of interest for the Specialist College sector and for the wider context of UK post-compulsory education. It also suggests some areas for the further development of enhanced practice through technology in the sector that have emerged from these projects.

A full report on each of the projects is also available as a separate document. This includes more detailed information on the institutional background and context, key specialisms and main student constituencies for each college. It also outlines the availability and use of technology in each institution, and the role of the project in helping to shape college ILT provision. It is intended to publish this report as a resource for the sector.

## **3. Project Summaries**

### **Bridge College, Stockport**

One of the main drivers for this project was evident student enthusiasm for using interactive whiteboards following a demonstration in the college in 2004. A key aim of the project was to promote the embedding of ILT and Skills for Life across the curriculum at the same time as developing staff ILT skills. Three interactive whiteboards have been installed and every member of staff has attended training. Staff have developed plans to include the interactive whiteboards in specific areas of the curriculum, and there has been a noticeable improvement in group working when the boards are used with autistic students.

The project is encouraging autistic students to work together, and allows entry-level students to actively engage in learning. More able students are encouraged to create resources of their own in response to the project. The use of the boards has also enabled the college to address feedback from Ofsted which suggested that all learners needed to be more actively engaged in lessons. Training sessions have helped to improve staff confidence, competence and morale.

### **David Lewis College, Alderly Edge, Cheshire**

The college caters for students with a complex mix of disabilities, and many are unable to use traditional musical instruments, computers and audio/video recording equipment. The aim of the project is to provide a professional working media suite for all college students and staff. This enables students with complex needs to participate in recording sound and creating music. Such a development improves the overall ICT provision within the college whilst improving

assessment procedures and encouraging creative learning within all the college curriculum areas.

Learners have been involved in producing their own music incorporating conventional instruments and a sound beam as part of the project. There are plans to use video and audio to measure progression and record achievement, ultimately providing each student with an electronic portfolio.

The students involved in the project are keen to carry on producing music through digital recording. Their confidence has improved as they hear the product of their efforts. One particularly interesting outcome has been the interest of students who have previously been disinclined to participate in group activities. In addition, generic student ICT skills are improving through using the equipment.

### **Derwen College, Oswestry, Shropshire**

The college has a wireless network which has started to slow down as the demands on it have grown beyond those envisaged as possible when it was first introduced. In addition it was inaccessible from some parts of the college. These difficulties were obstructing the acquisition of new equipment because of fears of network overload.

The aim of the project was to extend the network by means of fibre optic cabling to the most heavily used parts of the college, and to the new learning centre. When the cabling was laid, initial reports were of a significant positive effect on the wireless network, with a marked reduction in system downtime and the number of complaints from users.

The project has freed up bandwidth on the college network and allowed the new IT centre to work at full speed. This has made the introduction of RARPA possible as the old system could not have coped with the load. This in its turn has exposed more staff to IT and online working and has stimulated calls for data projectors and interactive white boards, which are now appearing in the college

The impact of the IT centre on the college has been considerable. As soon as the doors were opened the centre was oversubscribed. The College is planning the enlargement of its Garden Centre and a new retail centre is being planned to allow more opportunities for students to learn in working situations. IT will form a big part of these developments.

### **Dilston College, Corbridge, Northumberland.**

One project aimed to provide staff and students with a mobile networked solution offering online access to materials and information across the extensive college area and its thirteen residential units. The second provided hardware to connect the college's horticulture department to the main network and to enable students to use the broadband connection to update the pages of a new website offering a vegetable box scheme to customers in the area. The third project aimed to use GPS software and hardware to enable students with learning difficulties to understand the relationship between maps and the areas they represent. Using a large screen PDA allow students to navigate courses around the college looking for hidden objects and clues.

Staff see the potential of tablet PCs to enable more form-based input systems to enable records to be kept without having to be transcribed from paper notes. This makes substantial savings in staff time, and also transcends the current challenges of operating across a wide area and multiple sites.

The estates project has helped to demonstrate the value of technology for both record-keeping and providing interesting challenges for the students. The project has provided a powerful vehicle for the college to drive forward its ideas for embedding literacy and numeracy skills throughout the curriculum in ways that are real and interesting for students

The GPS project has provided a new range of activities combining sport and exercise with grasping the relationship between symbolic representations and the physical world.

There were some interesting interactions between the three projects, for example in the use of GPS to plan the cabling for the estates project.

**ESPA Colleges, Sunderland, Tyne and Wear**

The aim of the project was to develop the use of ILT and e-learning opportunities across the colleges by radically improving provision at the Tasker college, where learners with the highest potential for the use of ILT and e-learning are judged to be located.

A report on the state of IT across the ESPA colleges has recommended that all the colleges should be networked and connected to an intranet which will ultimately form the backbone for all college systems. The first step has been to replace outdated equipment with a new set of ten PCs, a laser printer and a server, and an interactive whiteboard in a neighbouring classroom, making use of the JANET connection. The other college sites are currently being networked with both cable and wireless connections.

The impact on learners at Tasker has been considerable. The new area is always busy and its success has heightened interest in the project across the college. The has acted as a catalyst for interest in ILT throughout the college, and has highlighted the value of interactive whiteboards to encourage active involvement of autistic students. There is a firm resolve to extend this provision to all the areas of the college.

There are plans to extend the use of online learning objects and materials across all the colleges in the group, and particularly to make use of NLN materials. While the short-term priority is to connect the rest of the college sites to one system, a future ambition is to develop the use of the system and to encourage the sharing of multimedia learning objects.

**Foxes Academy, Minehead, Somerset**

In common with many Specialist Colleges, Foxes has residential houses on a location separate from the main college site. A large part of the students' curriculum is delivered in these residences and much of the requirement for the keeping of records and information occurs there. If they are to work effectively, records and information systems need to be accessible from all the areas of the college.

The aim of the project was to provide robust and reliable connections across all college premises. These have now been connected using BT leased lines. The system has been in use for several months and is working reliably, enabling the full potential of the college's JANET connection to be delivered into residential establishments.

The project has had a major impact on the way that the college works. Email is now the established method of communication for staff across the college. Forms, information and resources kept at the main site are now available for printing out in each residential unit as required instead of being photocopied and ferried to the outstations. Regular use of the college management information system is improving the experience and expertise of staff and leading to the increased use of technology in general across the college.

**Henshaws College, Harrogate, Yorkshire**

The aim of the project was to create a bank of audio resources taking account of changes in kitchen technologies that can assist visually impaired students, such as talking microwaves and scales. Development of the resources also has to take into consideration file format and ease of use for students with complex needs, as well as the suitability of equipment for use in a kitchen situation.

The project is helping to facilitate the integration of the taught curriculum with the development of skills for independent living. An additional outcome is the possible use of sound files to record achievement relating to volunteering activities and events, which are seen as an important opportunity for students to contribute to society.

**Hinwick Hall College, Wellingborough, Northamptonshire**

The project focused on building mobile cabinets with a range of equipment and software. These include a mobile interface that allows student to play and share their own music video and games held on the colleges central server, and also provide a multimedia computer complete with projector and sound that can be accessed by students to provide an extra resource in classes anywhere in the college.

The project has enabled independent access to the kind of music and activities that are part of normal teenage life, and aims to make the advantages available on a more consistent and long term basis. It will also provide accessible workstations that can be used in any part of the college to augment existing provision.

The interfaces that allow students to operate music and video content are the same as those they use to access e-learning materials, so the more the interfaces are used, the more the students develop general facility with technology. The college plans to develop a web based front end for this system that will enable both music and learning objects to be accessed directly and simply by students.

This project recognises the importance of enabling young people with disability to do what every other young person does, and to do it for themselves, not have it done for them. The project will make sure that all students have the advantages previously available to a few and that the opportunity will be available to future students.

### **Homefield College, Sileby, Leicestershire.**

The college has a successful gardening project at the rear of one of its residential houses. The aim of the project was to provide access to the internet, college databases and information systems throughout the garden through a link from the router in the main house. Aerials have been installed and are working and a connection has been made between the main college site and the garden shed. When students working in the garden find a pest or a weed that they do not recognise, they can use the laptop to search on the internet, compare the images to make a reliable identification and identify the correct remedial action. Staff are able to update student records from the shed and from the polytunnel.

### **Lindeth College, Bowmere, Cumbria**

This project is developing e-learning materials in the area of speech and language processing. The college currently uses a specialist piece of medical rehabilitation software for analysing speech and language progress. They want to extend the possibilities provided by this software to the whole college and to offer a wider range of options and activities. The software has been produced and introduced to a large audience of college tutorial staff.

A number of different applications within Specialist Colleges are anticipated once the transition has been made from an analytical tool to a robust tool for e-learning. Many of the benefits of the new software will help the colleges to meet RARPA initiatives. Students using the system have demonstrated increased motivation and levels of concentration. They are able to focus their attention on the sounds of their own PC without being distracted by extraneous noise, which is recognised as a skill for life. Extension of use of the programme to a larger number of students can aid students speech and language development, in addition to motivation and concentration skills.

### **Linkage College, Toynton, Lincolnshire**

The main driver for the project was the realisation that there is a shortage of interactive ILT resources suitable for students with learning difficulties, as resources of an appropriate level are often inappropriate in terms of age. With this in mind, the project is developing ILT teaching resources to promote the embedding of skills for life provision across the college curriculum. It also promotes the effective use of ILT within teaching and learning and the sharing of good practice among staff, and is generating an interest and enthusiasm in e-learning.

The project provides exciting alternatives to traditional learning activities. The availability of new interactive resources in each classroom means that staff and students have immediate access to additional materials. The resources encourage group work amongst students and can also be used to consolidate learning at the end of a topic. The college recognises the importance of building on the enthusiasm for the use of technology to support learning and teaching that the project has helped to develop in staff and students.

**Minstead Training Project, Lyndhurst, Dorset**

This project aimed to provide presentation equipment and software for use in staff training and by the students for presentations relating to their work and for use in their leisure time. This includes the installation of a projector, control equipment and screen.

The intention is to involve students in creating visual presentations to demonstrate their progress and to showcase their achievements to other students and to their parents. This is part of a wider aim to give students more input into keeping records of their own progress and to help them find their own voice and means of expression.

Students have produced a record of their life and activities and their own progress which has in the past been printed out in hard copy. In future it is hoped to incorporate digital photographs and video clips and to assemble the portfolio as an electronic record for students to keep and use to illustrate their experiences and achievements.

The installation of the new equipment and the software and staff training that will accompany it forms part of a continuing programme of involving IT at all levels in the work of the project. The project has helped to illustrate the role of IT in producing compelling evidence of competence, and of the value of practical computing skills for life.

**National Star College, Cheltenham, Gloucestershire**

The aim of the project is to promote and provide staff development training sessions in the use of technology, to enhance staff proficiency in using ILT and their ability to meet the needs of students.

The project has caught the imagination of more members of staff than originally envisaged, with representation from various roles and areas of responsibility across the college. There has also been higher than anticipated interest from students, some of whom have demonstrated levels of existing IT skills that have surprised some staff.

As a result of the project, staff skills are increasing, as is their confidence in using ILT. The project provides the opportunity for the appointment of ILT facilitators across the diverse range of college roles, thereby ensuring that all staff have 'first line' access to ILT training, support, encouragement. Students are also benefiting from the appropriate use of ILT, with more interactive learning and differentiation to cater for a diverse range of learning styles and pace. There is a recognition of genuine efforts to raise the use and profile of ILT, with student demand as a major driver.

A measure of the success of the introduction of technology is the breadth of impact across all the role groups in the college and therefore all aspects of student life. One of the keys to success in this project is the active engagement of college management in demonstrating the potential uses of technology to support various aspects of life and work in the college, with relevance for different student interests and abilities, and different role groups among the staff. Good practice in encouraging the use of network and shared drives is discreetly and effectively built into the staff development workshops.

**Oakwood Court, Dawlish, Devon**

The project had three specific aims: to create a college website, to investigate the purchase or development of a staff intranet, and to investigate the use of a VLE for staff and students with access to age-appropriate learning materials. Increasing student use and engagement with computers and raised awareness of media-rich materials with graphics and animation has encouraged the college to explore the possibilities of repurposing NLN materials and other resources. The project also addresses the need for increased security and ease of access to student information, and to develop online student communication to enhance and facilitate the college's 24/7 curriculum offer.

The college has adopted highly consultative approach to the development of the website and decision-making with regard to a learning platform, involving staff, students and other stakeholders including parents. They are also investigating the opportunities presented by technology to provide support for transition students, and in the longer term to offer courses remotely. Staff have been engaging with their local JISC Regional Support Centre and are aware of increasing interest across the sector in open source platforms such as Moodle.

However, they also recognise the need to choose carefully a platform that will best serve the particular and very varying needs of their students.

One unexpected benefit of the website development has been the opportunity for students to maintain web pages of their activities and trips, which has provided a showcase for their progress and helped to develop their IT skills in a real-world context.

The scope of this project fulfils both immediate and longer-term aims of the college's e-learning strategy. These include developing a system that staff can utilise for access to their own staff development, while simultaneously considering its use in student delivery and integration with the college's MIS system.

### **The Orpheus Centre, Godstone, Surrey**

The aim of this project is to provide a digitally recorded ILP for 'apprentices' at the Centre as a record of their targets each area of the curriculum and the evidence that supports each target. They then produce a CD-ROM or DVD which is mastered and formatted by the apprentices to provide a comprehensive audio-visual record of their year at Orpheus.

A key objective for the project is the involvement of the learners in their learning programme, which will lead to improved learning, greater understanding of the process, and more motivated, and engaged learners. The embedding of numeracy, literacy and communication across the curriculum is facilitated by raising staff and learners' awareness of the learning process.

Learners have ownership of their ILPs and control over their own outcomes. The actual means of motivation is relevant to the learners, helping to develop appropriate audio-visual skills and supports the Centre's existing multimedia work. More generally, the project encourages staff and learners to have a positive, problem-solving approach to ICT.

Filming their experiences has also involved apprentices using cameras to record one another in action, which has had unexpected positive outcomes in increasing communication and support between peers, introducing an element of fun that has helped to build individual confidence and forge social relationships.

The project plays a key part meeting RARPA aims for the Centre and has had clear unexpected positive outcomes in terms of apprentice achievement, motivation and ownership of their own learning. In the longer term, the Centre would like to extend the facility to all apprentices so that all have a permanent record of their achievement. Key to this development is the choice of correct equipment, and the project has helped to raise awareness of some of the practical and conceptual issues that will inform this choice.

### **Pennine Camphill Community, Wakefield, Yorkshire**

This project focused on increasing use of the college intranet and IT resources by learners and to build on existing capacity to use monitoring and self-assessment of coursework and develop online portfolios. An overarching aspect of the approach was to encourage staff to help each other on a system that is as simple as possible. This has involved the installation of a server and thin clients that facilitate use with minimal basic support requirements.

The machines that have been installed are well used by staff, and are fulfilling their key objective of embedding the use of ILT into these areas of the college. Most staff have improved their skills and increased their confidence in using technology, and the ability to reset the machines to revert to a 'known good' configuration has helped boost confidence.

The college wants to embrace RARPA and sees technology and its competent use by staff as the way to achieve this. They are planning to purchase a MIS/database system to enable student records to be kept online and for recording student progress throughout the college. They hope that by using this system they will be able to export completed reports from the database rather than having a termly writing session. They are exploring the use of online portfolios with students in order to involve them in making records of their own experience and achievements.

In keeping with the ethos of the establishment, the college is interested in using technology to enhance its activity-based learning approach. Students are becoming enthusiastic users of IT. Staff have been encouraged to think of innovative ways of using technology to support learning, and while progress has been slow, there have been some positive developments.

**Queen Alexandra College, Harborne, Birmingham**

The main driver for the project was to improve the use and scope of IT in classrooms by more use of both visual and audio media and by encouraging cooperative working between students. Traditionally students have been taught in classrooms and workshops without a blackboard or whiteboard as the focus of the room, the assumption being that these aids were not useful to blind students. However, very few students have no eyesight at all and the college is looking for solutions to provide more differential delivery. The project provides two interactive whiteboards and fitted data projectors with classroom management software which allows the contents of the whiteboards to be broadcast to each client machine in the room. The project also provides staff training in the use of the whiteboards and software.

Students at the college are very used to working on their own with a PC and the assistive software they use to interpret content. It is hoped that the project will enable students to improve their communication skills by encouraging small group working. The college is seeking to improve cooperative and group working and see the potential of interactive whiteboards to capture the outputs of collaborative work. They are also keen to test the interactive possibilities of the whiteboards with students at entry level, and appreciate the potential of the technology to provide more differentiated learning experiences for students with a wide range of visual impairments.

**RNIB College, Loughborough, Leicestershire**

The aim of the project was to take a specialist Daisy player and work with the supplier to adapt it for use in an educational setting, converting the college's ICT learning resources to e-learning Daisy books to trial with this player and collect feedback from staff and learners.

This is resulting in a fundamental change in the delivery of teaching throughout the college and is radically enhancing the ways that learning materials are used. All resources are currently available on audio tape, but will eventually all be converted to Daisy format. This will allow for all resources to be networked, improving their accessibility and ease of use.

The use of the new format offers significant advantages to those with all kinds of reading difficulties as well as the visually impaired. Staff and students will be able to access resources remotely, which could have a significant impact on learning and teaching methods across the college. Unlike the traditional audio tapes, the quality of recording will remain consistent over time, and will be accessible to large numbers of learners.

**Ruskin Mill College, Horsley, Gloucestershire**

This project aimed to improve IT access for students in their house groups, and to increase their opportunities to access the web and college materials from their homes. Four residential homes of different types and locations were piloted with a view to extending the facility and forming a strategy for wider rollout across the thirty-five or so homes of the college.

The original intention was to use the Microsoft SharePoint Portal as a framework for carrying information to the residences. The college recognises that it must provide a system that is simple and robust and one that delivers what the users need. In order to ensure security of the whole network it is intended to only allow connection to the internet via the main site and the colleges JANET connection and web filtering system.

This project is the kernel of a wider move to improve communication between residential houses and main college sites. Communication between teaching staff and house staff is difficult since they work at different times, and in these circumstances email is often a vital element of good communication. The overall vision is to bring an effective connection to every residence and to every location where learning takes place, however remote. Opportunities to use the technology to start a vegetable box scheme involving students and to market the fish from the farm are being explored. All of these activities involve work by students in 'real life' situations and the college wants to develop the exposure of its students to this technology as quickly as possible.

**Sense East, Market Deeping, Cambridgeshire**

The aim of the project was to improve the use of switching technology in a new education facility to allow better access for deafblind students to learning objects and in particular to allow the use of cause and effect software with students to improve their interaction and responses.

The project has shown that the use of technology to provide stimulation and experience of cause and effect can bring very large benefits for this group of students. For many students these are the first opportunities they have had to initiate things happening of their own volition.

The college plans to use many more switches and computers with other students and residents. They hope to be able play a part in future developments for deafblind students through research projects with the University of Manchester. They are also interested in the development of a 'talking glove' that may lead to an communication system for the deafblind using the 'hand on hand' signing method of communication. This project illustrates the potential use of relatively simple technologies to improve the learning experiences of a particularly challenging group.

### **Thornbeck College, Sunderland, Tyne and Wear**

The college has recognised the need to increase its exposure to computers and technology to allow staff and students to benefit from materials available in the wider world. In particular staff are convinced of the benefits to students with autism of exposure to music and the opportunities to create music. They feel that this is an interest and ability that transcends the disabilities that these students have. They also want to increase the use of images which they feel are particularly effective with the learners.

Through the project, five new PCs, a multimedia computer and some assistive technology have been purchased and installed in a new music room in the college. The new equipment has enabled staff to produce learning materials to suit a much wider range of learning styles, particularly using sounds and images. The use of digital images is blossoming in the college and a room has been set aside for making and keeping students scrapbooks. Students record their own progress and interests using digital photographs and printed materials.

The experiences of this project have confirmed that combining images and sounds has particular value for autistic learners. Putting images on the interactive white board and then attaching sounds so that the sound is played when the image is touched has enabled major improvement in communication and involvement and has also encouraged a sense of fun that has a positive impact on learning, confidence and motivation.

### **Treloar College, Alton, Hampshire**

Due to recent changes in the syllabus and qualification system, necessitating the development of new handbooks and course information, the college has identified a need to revisit the ways it stores, accesses and retrieves course information. The aim of one project was to provide a structural model for the development of HTML resources which can be used in vocational courses, populated with standard data about the course structure and assessment, and subject specific resources.

An important element of the project is the facilitation of access to course information for use by students and staff with a view to encouraging the further use and development of e-learning in the future. A process of consultation and mutual collaboration has encouraged staff to engage with the process and feel a part of the decision-making, and has resulted in a much more positive reaction to the introduction of the new approach than was initially envisaged.

A second project addressed comments from teaching quality inspectors about the apparent lack of a holistic approach to planning student development and setting learning targets in the college, recognising that more use could be made of the functionality of the college's MIS to provide an overview and systematic update of student progress. The aim of the project is to transfer all therapy targets into the MIS to allow more efficient recording and retrieval of individual therapy goals for students.

This represents a substantial change to the way the therapy department works, but savings in time and increased mobility are encouraging staff to engage with the technology.

The third project is concerned with the development and use of age-appropriate materials. The launch of Clicker 5 has enabled new grids to be created, including images, video clips and sound. In this context, the project aims to develop a large bank of current and age appropriate resources for use by both staff and students at the college. It also aims to develop resources for Clicker 5 and share these with Crick Software Grid users, and to ensure that staff at the college can use the resources and equipment effectively

Staff development is crucial to success of the project. While there are issues with finding good quality, appropriate images, a greater concern is the creative time for staff to come to terms with the tool and develop their understanding of how it can be embedded into sessions. Storing and metatagging images and resources have been identified as a challenge to be addressed.

Through these projects, the college is able to draw on best practice in developing its systems for organising, developing and delivering learning experiences. All the projects help the RARPA agenda. In the longer term, the main impact of the three projects lies in the use of technology to encourage independence as part of an overall context of lifelong learning, as an integral entitlement that empowers students and promotes equality of opportunity.

## **4. Key Findings**

### **4.1 Staff capacity**

Several projects note that staff baseline IT skills at the outset of the project were not as well developed as was initially thought and planned for in the project. While this has been addressed through formal staff development initiatives, an important element in the project activities has been the gradual raising of staff awareness in the potential of technology to enhance their professional activities. Cascade models of training and awareness raising, peer support and the enthusiasm of some early adopters are helping to develop staff skills in many institutions.

The specific focus of the projects has helped to develop generic ICT skills development and promote the wider use of ICT/ILT across institutions, including the use of both generic software applications and specialist systems. In many instances, activities funded through the innovation projects are leading to significantly increased levels in staff confidence, motivation and enthusiasm for the use of ILT in the curriculum. Cascade models are being adopted for the internal dissemination of skills and good practice using early adopters and enthusiasts from the staff.

### **4.2 College systems**

There is a general awareness in project institutions of the potential role of technology in enhancing the use of student information both to inform the learning process and to enable more effective recording and reporting of progress. A large number of colleges are using technology to support RARPA initiatives by providing compelling evidence of competence. The development of communication systems to meet the needs of different staff groups and varying student needs and abilities is also highlighted as a key driver for improving the technical infrastructure of the colleges.

While a number of colleges have developed in-house database systems for managing student information, several colleges have implemented the same proprietary MIS product. There is increasing interest in the further development of this product and use of its potential functionality, including technical integration with other college systems. There is also growing interest in the use of VLEs, particularly open source platforms such as Moodle. The work of the projects indicates that there are considerable opportunities for further development work to facilitate the integration of systems and platforms and their use to enhance teaching, learning, assessment and reporting.

### **4.3 Benefits for students**

All of the projects have identified increased confidence, enthusiasm and motivation in learners as a key benefit of the introduction of technology to the curriculum. Examples are highlighted of improved communication and group working skills in learners with complex disabilities, including some particularly challenging groups. Multimedia environments can stimulate positive responses in the interaction of sound, image and sensation. The introduction of an element of fun through learning with technology has helped to build individual confidence and forge social relationships. In some contexts, the use of technological solutions is also providing opportunities for a more differentiated learning experience taking account of individual needs in a group setting.

The focus of many projects has been on the opportunities presented by relatively simple tools and technologies to help to develop skills for independent living. Several have also enhanced their provision for developing vocational skills and expertise in real-world contexts including

retail and administration. Projects have focused on encouraging independence as part of an overall context of lifelong learning, as an integral entitlement that both empowers students and promotes equality of opportunity.

Some of the practical examples of innovative work with new technologies such as GPS systems and digital cameras to improve learning by embedding life skills in the curriculum merit further development as case studies and good practice guides.

#### **4.4 Institutional development**

Several projects have resulted from student-led initiatives and suggestions, some highly imaginative. There are indications that the use of technology in the funded project has in several colleges led to a demand from students for its expansion to other areas of institutional activity.

A key aspect of the success of many projects is the vision and direction provided by senior managers, coupled with operational engagement and specific support for project activities. Most projects have also benefited from the availability of in-house specialist technical knowledge and support. There are a number of examples of the positive role of TechDis part-funded technicians in helping to shape, drive and support the work of the projects and their wider influence on the development of ILT across institutions.

The development processes adopted by some projects offer examples of good practice in consultation, awareness-raising and the engagement of a wide variety of different stakeholders and interest groups.

The projects have also highlighted the extent of partnership working in the Specialist College sector. Colleges have developed important relationships with software developers, and with support agencies such as the JISC RSCs and TechDis as well as charitable trusts and foundations. Many have also developed collaborative relationships with local schools, colleges and higher education institutions which are of benefit to students in transition. There may be further opportunities for collaboration with FE colleges, schools and other agencies to facilitate technical implementation and systems development, the development of age-appropriate resources for online delivery, and the sharing of expertise and experience.

#### **4.5 Final thought**

The Specialist College Innovation Fund projects have served to highlight that relatively small amounts of funding, carefully disbursed and with appropriate supports in place, can result in almost disproportionately effective outcomes and developments in the use of technology to support the work of these institutions.

## **5. Areas for Further Development**

The project experiences have identified a number of areas for potential further support and development work in the sector. These include:

- information and support on the choice of tools and learning platforms, including open source and proprietary learning environments
- the development and integration of college information systems
- the procurement and development of age-appropriate online resources
- systems for storing and retrieving resources, intranets, file management structures and security issues
- accessibility and usability issues
- strategies for addressing practical issues such as battery life, software incompatibilities, interface design and device shapes
- the development of good practice guides and case studies of innovative work with tools and technologies such as GPS systems, digital cameras and interactive whiteboards
- collaborative developments with FE, schools and other agencies

## **Acknowledgements**

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**Glossary of terms**

ASD	Autistic Spectrum Disorder
ACL	Adult and Community Learning
CD	Compact Disk
CLAiT	Computer Literacy And Information Technology course
CMS	Content Management System
DfES	Department for Education and Skills
DVD	Digital Versatile Disk
ELWa	Education and Learning for Wales
FE	Further Education
GCSE	General Certificate of Secondary Education
HSBP	Henshaws Society for Blind People
ICT	Information and Communication Technologies
ILT	Information and Learning Technologies
ILP	Individual Learning Plan
IT	Information Technology
JANET	Joint Academic Network
JISC	Joint Information Systems Committee
JOS	JISC Organisational Support committee
MIS	Management Information System
LSC	Learning and Skills Council
NHS	National Health Service
NLN	National Learning Network
NVQ	National Vocational Qualification
Ofsted	Office for Standards in Education (England)
RNIB	Royal National Institute for the Blind
PC	Personal Computer
RARPA	Recognising and Recording Progress and Achievement in non-accredited learning
RSC	Regional Support Centre
RTU	Residential Training Unit
SHDSL	Symmetric High-bitrate Digital Subscriber Line
VLE	Virtual Learning Environment
VPN	Virtual Private Network

# **Appendix: Colleges and Projects**

## **Bridge College**

### **Background**

Bridge College is a non-residential college situated in Stockport, Greater Manchester. The urban location provides easy access to a range of community facilities and other FE providers. Opened in 1993, the college caters for young people with a range of complex learning difficulties, physical disabilities, communication disorders and autism. There are around 70 full-time day students, and more than 100 staff members.

The college is part of the Together Trust<sup>1</sup> (formerly the Boys and Girls Welfare Society), a charitable organisation who have provided opportunities for young people in need throughout the North of England and North Wales since 1870. It caters for young people with a range of complex learning disabilities and difficulties and has special provision for students with autistic spectrum disorders.

Further education programmes offered include literacy, numeracy, the development of communication, pre-vocational skills and community participation. Particular emphasis is placed on the improvement and development of communication skills. In addition, students are presented with opportunities for integration into mainstream colleges and local work placement schemes.

### **Use of technology**

All tutors and the senior management team have been provided with a laptop. Each group of therapists also has a laptop. In addition, every session room is equipped with at least one PC. Students have access to an IT suite which is supervised over the lunch break.

The college has networked PCs available for use by staff and students, but does not currently have an intranet. The college has recently committed to buying the Databridge management information system (MIS) with a view to running the main administration systems on a single network.

### **The Innovation Project**

Bridge College had a demonstration of interactive whiteboard technology in 2004. The students who attended the demonstration responded with great enthusiasm, providing an incentive to install interactive whiteboards across the college.

SmartBoard was chosen as the brand of interactive whiteboard as the software allows pictures such as Makaton symbols to be loaded into the gallery. However, as in many colleges, teaching staff have little free time for creating resources. The Innovation Fund project has provided three new SmartBoards, and has allowed staff to be released from their teaching or therapy commitments to create resources. A key aim of the project was to promote the embedding of ILT and Skills for Life across the curriculum at the same time as developing staff ILT skills.

The SmartBoards and projectors were installed at the end of 2005. Every member of staff across the college has attended a training session for using the boards, plus training on the use of PowerPoint. A booklet of step-by-step instructions has been created for use by staff. Tutors and therapists have attended a second SmartBoard training session where they had the opportunity for hands-on practice.

Staff have submitted numerous ideas for the use of the interactive boards across the curriculum. One proposal has been developed by the sport department in collaboration with physiotherapy, and aims to create an interactive fitness programme. The resource will incorporate video clips of people using various equipment and interactive exercises. For example, students on a weight reduction programme will be able to type in their weight and calculate how much they have lost. This will be accompanied by animations of various corresponding objects, such as a bag of potatoes, to provide visual motivation for the students. Other suggestions have included a hangman game, personal hygiene routine, sequencing of activities for horticulture, maths and basic skills resources.

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<sup>1</sup> [www.togethertrust.org.uk](http://www.togethertrust.org.uk)

A particular challenge that has been met was the lack of IT skills in some staff. This initially resulted in some resistance to the project, but training sessions have helped to improve confidence, competence and staff morale. Staff are taking pride in their achievements and their general upskilling.

The project has also seen an improvement in communication between students with autistic spectrum disorders. It has been noticed that ASD students will work together effectively when using the SmartBoards, when under other circumstances they would not work within a group.

### **Benefits and future plans**

Although the resources have not yet been created, the SmartBoards are being used by several members of staff. The use of the boards has addressed feedback from Ofsted which suggested that all learners needed to be more actively engaged in lessons.

It is expected that the students themselves will be creating resources for use with the SmartBoards. Some of the more able students can already create sophisticated PowerPoint shows. In addition, entry-level students who are unable to read and write have also been able to engage with the boards.

The project leader would like to see more whiteboards installed across the college, and plans to purchase one per year in the medium term. There are several other development plans, and current priorities include providing a shared calendar for staff, the availability of roaming profiles allowing personalised access, and the development of a college intranet.

The SmartBoard project will be an ongoing development for the foreseeable future. In addition, the college has committed to buying Databridge, and therefore student progression will be tracked more efficiently in future. e-Portfolios or electronic records of achievement are also planned.

In the longer term, the college has a vision to maximise the use of ICT in the classroom, and enable both staff and students to exploit it.

## ***David Lewis Centre***

### **Background**

The college is part of the David Lewis Trust and is situated on a 40-acre site south of Alderley Edge in the Cheshire countryside.

David Lewis (1822–1885) was a successful businessman who left his fortune to be used for the benefit of the working class people of Manchester and Liverpool. The David Lewis Trust<sup>2</sup> was founded on the 7th July 1893. Two committees were established, one for Liverpool and one for Manchester. A group in Manchester who wished to provide facilities for people with epilepsy applied to the David Lewis Trust for support. The Manchester Committee purchased the land and built the Sandlebridge Colony which they donated by way of a Trust Deed, and the David Lewis Manchester Epileptic Colony accepted its first two residents on 11 October 1904.

David Lewis College's mission statement is 'to enable young people with complex epilepsy and related neurological conditions to make the optimum transition to adult living by recognising potential, developing skills, building confidence, raising self-esteem and maximising individual capacity for independence'.

The college accepts students characterised by one or more of the following: intractable epilepsy; moderate to severe learning difficulties; behavioural difficulties; autistic tendencies. A multi-disciplinary medical team is supported by a range of therapies including communication support, physiotherapy and hydrotherapy.

The curriculum includes literacy, numeracy and communication; a range of accredited vocational courses; independent living; and, Information Learning Technology skills. In addition, students are presented with opportunities for integration into mainstream colleges, work placement schemes and a wide range of sporting, social and leisure activities.

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<sup>2</sup> [www.davidlewis.org.uk](http://www.davidlewis.org.uk)

The college accommodates 60 full-time students. Attendance is largely residential, although there are currently 8 day students, and 4 students who reside within the David Lewis Centre, but not the college.

There are over 100 staff across the college, including those based in the residential houses. 39 of these staff members are teaching or teaching support staff.

The majority of students are funded by the Learning & Skills Council (LSC). Students from Wales are supported by Education and Learning for Wales (ELWa) and from Scotland by their local authority. For students with particular needs, part of their funding may come from local Social Services or their Primary Care Trust.

The David Lewis Centre is governed by a board of trustees.

### **Use of technology**

The PC:student ratio is currently 1:2, and the PC:staff ratio is similar. There are at least two PCs in each teaching room, and IT subject rooms are equipped with three or four machines. In addition, the staffroom contains ten laptops, which can be booked out for an evening if required. There is a desire to increase the number of PCs available in the residential units.

All staff and students have college email addresses and user accounts. A site intranet for the whole David Lewis Centre is available, and a dedicated college intranet is under development.

The college has developed its own MIS, which started with student registration and room utilisation. A full MIS has been rolled out and is now in a second phase of development to become more user friendly, and possibly incorporate a folder for each individual student, to enable personal tutors to track student progress.

Technical support for the college is provided by a TechDis part-funded technician, supported by a central IT department for the David Lewis Centre.

Staff development for ILT is incorporated into the structured staff development programme. A series of twilight awareness raising sessions has been delivered on the subject of writing with symbols – a subject identified as a key priority for staff development.

The staff development budget has been utilised to release one member of staff from teaching duties to work as the college ILT champion. Both the ILT champion and the part-funded technician provide support for staff on an individual basis.

### **The Innovation Project**

The idea for the project was developed when students were witnessed benefiting from the use of video and audio within the classroom. Students were enthusiastic when producing their own CD in music classes. Video had been used to record performances but was thought to be of a quite amateur standard, and this created an incentive to acquire more sophisticated equipment.

The college caters for students with a complex mix of disabilities, and many are unable to use traditional musical instruments, computers and audio/video recording equipment. The aim of the project is to provide a professional working media suite for all college students and staff. This enables those students with the most complex needs to participate in recording sound and creating music. This development enhances the overall ICT provision within the college whilst improving assessment procedures and encouraging creative learning using ILT across all the areas of the college curriculum.

Equipment for the media suite is being piloted by staff and students, to ensure that the budget is spent on items that will be fully utilised. A recording area has been established and is frequently used in music classes. One group of pre-independent students has used the recording area to create a piece of music incorporating vocals, several traditional musical instruments and a soundbeam. Special effects have been added with the use of an electronic keyboard and production software. The software has enabled the students to edit the music themselves, by adding, removing or changing the position of the individual instruments. A student with complex physical and communication disabilities has been involved in the project by recording her voice, and has been able to create music using the soundbeam.

Initially, students were reluctant to be involved in recording sessions, particularly when asked to record their own voices. However, they are now enthusiastic, and confidence has improved as they hear the results of their efforts.

Members of the project team have been investigating the use of Windows Movie Maker for basic animation. This allows the design of a storyboard and characters to be animated and accompanied by sound effects and backing tracks. This initiative has created links with the nearby Cosgrove Hall animation studio, and is providing new incentives and ideas for teaching within the college.

The college is investigating the introduction of a video usage policy in order to protect vulnerable students. Eventually video footage will be used for recording student achievement, but college managers are keen to overcome the risks first by including a video use policy within the student registration process.

Training in the use of equipment has been provided to a small core of staff who are keen to experiment with new methods. There are plans to carry out further awareness raising to promote the concept of using multimedia in teaching to other members of staff. Already there are members of staff in other areas of the college who are keen to be involved, and it is hoped that evidence of success will be key in cascading ideas and good practice throughout the college.

### **Benefits and future plans**

Across the curriculum there is an emphasis on recording student achievement. Ultimately the college would like to produce a CD for each student containing video, audio and text records of their achievements, which could be used as electronic CVs or profiles. Staff are investigating ways of using video clips in this context, by the addition of captions. The use of 'before and after' video clips is also being explored as a way of measuring progression. More awareness raising will be required to develop staff understanding of the importance of this type of evidence, and its relevance to their work in setting personal goals for students.

The introduction of the media suite will help the college to address its the key staff development priorities to make more creative and innovative use of ICT and disseminate ideas and good practice.

In the immediate future, the college is investing in more specialised equipment. More assistive technologies and switches will be purchased, and sensory facilities will be improved. There are plans to revise the college ILT strategy to focus on the use of ILT within the classroom, and include making more creative and innovative use of technology to enhance the learning experience.

## ***Derwen College***

### **Background**

Derwen College is located in a rural area outside Oswestry in Shropshire. Originally set up as a rehabilitation centre after the second world war as a work centre specialising in boot and shoe repair, over the years it has developed into a college and residential centre, with a working restaurant and garden centre open to and well patronised by the public.

Most types of disability are represented in the student group. The college has a distinct vocational bias and is involved in preparing students for as independent a life as possible through work-based learning.

The college has 242 students, most of whom are residential. It also has 37 trainees who are mostly former students who have returned for a further period of training, some of whom have been at the college for a considerable time. Most of the residents are accommodated in houses either on the site or in the neighbouring community.

Most of the students are funded through the LSC or ELWa. Some have joint funding involving their social services departments.

The College itself is a charity with a board of governors. Operational management is undertaken by a director, assistant directors and a senior management team.

### **Use of technology**

There are about 200 PCs on site. Some tutorial staff also have laptops but mostly access college workstations. PCs are used for administration and for student record keeping. Students use IT both in their work and for leisure purposes and have access to email. The college has

recently opened a new IT centre which is available for student use between 10.00 am and 7.00 pm. This resource is very popular and there is already pressure to open it for longer periods.

The college has two major databases, one for the core curriculum and one for the extended living curriculum, incorporating a student tracking system using tasks and objectives into which staff can input and enter their comments about progression. There is a college intranet and internal email system. The college uses an electronic accounting system and has recently implemented a new library issuing system that uses fingerprint recognition to control the issuing and returning of books.

System support is provided by an outside contractor. All decisions relating to the provision of ILT go through a committee that meets on a termly basis. There is a continuous and comprehensive system for staff development and CPD. Courses run from the new IT centre and from the business centre cover issues such as database input and using common software applications.

### **The Innovation Project**

The college's wireless network has been in place for some years. Due to increased demand it has been beginning to show signs of slowing down and it cannot reach the more distant parts of the college site. These difficulties were obstructing the acquisition of new equipment because of fears of network overload.

The aim of the project was to extend the network by means of fibre optic cabling to the most heavily used parts of the college, and to the new learning centre. When the cabling was laid, initial reports were of a significant positive effect on the wireless network, with a marked reduction in system downtime and the number of complaints from users.

### **Benefits and future plans**

The project has freed up bandwidth on the college network and allowed the new IT centre to work at full speed. This has made the introduction of RARPA possible as the old system could not have coped with the load. This in its turn has exposed more staff to IT and online working and has stimulated calls for data projectors and interactive white boards which are now been installed in the college.

The new network will enable fuller use of the new IT centre. The college is also planning the enlargement of its Garden Centre and a new retail centre is being planned to allow more opportunities for students to learn in working situations. IT will form an important part of these developments.

## ***Dilston College of Further Education, Hexham, Northumberland***

### **Background**

Dilston College is situated in a rural area on the other side of the river Tyne from Corbridge in Northumberland, and specialises in learners from 16-19 years old with moderate to severe learning difficulties following a three-year FE programme. There are 120 full-time and five part-time members of staff. The college has seven residential units on the site and four further units in Hexham. Currently there are 61 full-time residential students and 15 day students.

Most students in the college are funded by the LSC, with some receiving additional funding from their local authorities.

The college is part of the MENCAP National College with Lufton College and Pengwern College in Wales, which is overseen by the MENCAP Board. The management team comprising college senior managers and operational managers is the policy-making body for the college.

### **Use of technology**

Tutors have laptops for their own use and all classrooms are equipped with PCs. Staff use PCs for preparing materials, email communication and administration. The college has a web-based asset register and IT problem reporting system built in house. The Databridge MIS system is used to record students course and personal details and record progress against targets as well as for timetabling. All students have access to PCs both in college and in residential units. Students log on to the system using a generic group account. Students use Yahoo and web

mail for their email although a college email system for students is under consideration. The college currently has about 40 desktops and 55 laptops.

There are networked connections throughout the college carried on fibre and by wireless within the college and via broadband connections and a VPN (virtual private network) from outlying residential units. A server-based file structure is in place, and consideration is being given to changing to a net file structure.

IT support is provided by a TechDis part-funded technician (shared with other colleges in the area) who also offers some staff training especially on the use of digital images, software applications and the use of email. An IT co-ordinator has recently been appointed.

## **The Innovation Projects**

### **1. Mobile Networking**

Given the extensive size of the college site and its thirteen residential units (some of which are off site), staff increasingly require access to the college systems and up-to-date information across a wide area. The aim of the project is to provide staff and students with a mobile networked solution providing online access to materials and information as needed, and to gauge the potential for tablet PCs and handwriting input in a mobile setting.

A tablet PC has been purchased for staff and students to evaluate and positive feedback was received. Staff want to use it to input meeting and other notes when they are mobile using the pen-based system in place of the previous process of transcribing written notes. It is anticipated that form-based software will be introduced to enable staff to use the pen inputting system to fill in reports as they travel around the site and store them directly onto the college server.

Staff are keen to use the tablet PC with a symbol-based communication system that can be accessed by students using the touch screen features. There is an identified need for a portable simple system that can be used to assess students needs and in particular to help with communication.

### **2. Estates Development**

The college's horticultural department produces vegetables that are used in the college and sold via a vegetable box scheme under the name 'Cropped Up'. The aim of the project was to bring this scheme online to enable better record keeping and to make it easier for customers to order produce.

The project includes the work and equipment necessary to connect up the horticulture department and the stables to the college network and to provide PCs in these locations. This enables students to research issues relating to horticulture and animal care from the estates buildings themselves. As part of the college's plan to embed literacy and numeracy into student activities, they intend to set up an online shop for the box scheme. The web site includes a news page to keep customers informed about events in the estates department, new vegetables they are growing, the new tractor, and a birdbox webcam streaming live pictures of the occupants. A content management system has been developed which allows students to change the online information on a weekly basis.

The project has caught the imagination of students and staff alike, and the opportunity to maintain an online record of student progress has been welcomed.

### **3. GPS Mapping**

Physical pursuits in the college includes sports, walking and a number of external activities. Students with learning disabilities often experience difficulties relating information shown on a map with where they are on the ground. The project aims to provide students with the opportunity to use maps and to see how they work. Using a large screen PDA and mapping software connected to a GPS receiver the students can see the relationships between the map symbols and objects on the ground. Having a map with an indicator to show exactly where the user is, how they are moving on the ground and how this relates to the map, is a great help in learning the relationship between maps and the physical world.

The equipment is in regular use, achieving all that was hoped for of it and more. It has enabled students to grasp the relationship between what a building actually looks like and its

representation on the map as a square. Students have been undertaking geo-caching exercises, where they have to use the map to find hidden objects or words at particular way points. These exercises have provided many opportunities for problem-solving. Using the equipment has also inspired several ideas for other applications. Many of the students have spatial awareness problems and finding their way can be extremely difficult. Using this equipment can make a major difference to their ability to operate effectively.

### **Benefits and future plans**

The introduction of the tablet PC has produced many good ideas for the use of further machines for example:

- Use as a communication tool for students with speech that is difficult to understand.
- To use with on-line web based forms for common purposes like booking vehicles and providing input to the duty book.
- To provide touch screen access to basic college systems like timetables and menus.
- To provide a method for students to take part in college equipment audits by taking the tablet with a form to count them.

Staff see the potential of tablet PCs to enable more form-based input systems to enable records to be kept without having to be transcribed from paper notes making substantial savings in staff time, and to transcend the current challenges of operating across a wide area and multiple sites.

The estates project has helped to link the work of the estates department with the rest of the college, using IT and technology in keeping records and providing interesting challenges for the students. The project has provided a powerful vehicle for the college to drive forward its ideas for embedding literacy and numeracy skills throughout the curriculum in ways that are real and interesting for students

The GPS project has provided a new range of activities combining exercise with learning about relationships between maps and diagrams and reality. The department is planning to develop the work by producing a variation on the soft ware that will have interactive pages built into a map of the grounds so that when the student arrives at a particular place a page opens up with a question or with a task to undertake.

[PHOTO – HORSE AND PC]

## ***ESPA Colleges (North Rye/Ashleigh)***

### **Background**

ESPA is a complex of three college sites and two residential units situated in urban parts of Sunderland and Newcastle upon Tyne. The colleges have been established to meet the needs of students with autistic spectrum disorders and associated difficulties (including mental health problems such as depression), providing a three-year programme of education for learners between the ages of 16 and 25.

There are 108 learners in the colleges with around 40 to 50 students at the largest of the three colleges, Tasker in Sunderland. Between 250 and 300 full and part-time members of staff are employed across the different locations. There are two residential units in Sunderland and Newcastle offering a total of 38 residential places.

Most of the learners are funded directly by the LSC, with some additional local authority funding. ESPA is a charity overseen by a Board of Trustees. Each college is managed by a co-ordinator and a senior management team.

### **Use of technology**

There is ad hoc provision of PCs across the college. While most areas have PC access, the equipment at Tasker, the largest site, was quite dated and relatively ineffective. There are five interactive whiteboards in effective use, and an intention to install more whiteboards across all the college locations.

Only the main Sunderland site is networked. Computers in the other colleges are standalone units offering little opportunity for the effective sharing of resources and information. All staff and students have access to external email accounts but there is no college wide email system. Within the main site there are computerised systems for training, payroll and accounts.

The college is in the process of making major changes in this area and has commissioned an external report to make recommendations for updating the computing system. This has recommended a wide area network to cover all of the sites with a college wide email system and integrated voice communication.

The College has used external contractors for the support of their existing systems, and now has part-time assistance from a TechDis part-funded technician based at another local college. Mini IT staff development sessions are being organised for all staff as part of staff induction, and an external agency is developing a programme for upskilling staff on the use of assistive technology.

### **The Innovation Project**

The college is aware that it has fallen behind in the provision of IT and e-learning. A recent report on the state IT across the colleges has recommended that all the colleges should be networked and connected to a college intranet which will ultimately form the backbone for all college systems.

The aim of the project was to develop the use of ILT and e-learning opportunities across the colleges. In the first instance, funding was focused on radically improving provision at Tasker, the biggest site, where learners with the highest potential for the use of ILT and e-learning are judged to be located. Outdated equipment at Tasker has been replaced with a complete new set of ten PCs, a laser printer and a server, and an interactive whiteboard in the neighbouring classroom. The equipment has been selected, installed and configured. This equipment is making good use of the JANET connection which was previously underused with the old equipment. Roaming profiles have been set up for all users in the new suite. The other colleges are currently being networked with both cable and wireless connections.

The impact on learners at Tasker has been considerable. The new area is always busy and its success has heightened interest in the project across the college.

### **Benefits and future plans**

This project has acted as a catalyst for interest in ILT throughout the college, and already a wireless connection has been made to the administrative block.

The growing use of interactive whiteboards has highlighted the particular relevance and value of ILT for students with autistic spectrum difficulties. The touch access feature of the whiteboards has great capacity to encourage active involvement and collaborative working.

The College plans to extend the use of online learning objects and materials across the college, and particularly to make use of NLN materials. While the short-term priority is to connect the rest of the college sites to one system, a future ambition is to develop the use of the system and to encourage the sharing of multimedia learning objects.

## ***Foxes Academy***

### **Background**

Foxes Academy is a working hotel open to the general public, situated on the esplanade at Minehead in Devon. It opened as a training hotel in 1997 for young adults with mild learning difficulties and/or disabilities. The college has around 55 students working towards the Essential Skills award and progressing on to an NVQ in Hospitality and Catering. Students live in several houses in Minehead within a radius of a mile or so. Students at the college are funded by the LSC or by ELWa with some additional funding from local authority Social Services departments. Foxes Academy Ltd is a private company with two directors, one of whom is the Principal, and is managed on a day to day basis by a Senior Management Team.

### **Use of technology**

The Academy has 30 PC workstations and 27 laptops, and has recently installed an interactive whiteboard. Computing is mainly used for administration and for student record-keeping using the Databridge system.

Students and staff have access to a college network, and staff have access to the college email system.

Technical support is provided by a TechDis part-funded technician who provides help and advice to all staff, and manages the colleges equipment and network.

### **The Innovation Project**

In common with many Specialist Colleges, Foxes has residential houses on a location separate from the main college site. A large part of the students' curriculum is delivered in these residences and much of the requirement for the keeping of records and information occurs there. If they are to work effectively, records and information systems need to be accessible from all the areas of the college. A previously installed wireless connection to extend the network had proved unsatisfactory in bad weather and could not be extended to other sites in the town because they were out of the line of site.

The aim of the project was to provide robust and reliable connections across all of the college premises, which have now been connected using BT leased lines. This has involved researching the optimum solution, and the college has sourced the necessary SHDSL (Symmetric High-bitrate Digital Subscriber Line) modems. These modems are more usually used by the telephone companies allow high-speed connections via a standard copper telephone line. At the college end, the leased lines are brought into another device that connects all the external houses to the college network. The system has been in use for several months and is working reliably, enabling the full potential of the college's JANET connection to be delivered into residential establishments.

### **Benefits and future plans**

The project has had a major impact on the way that the college works. Email is now the established method of communication for staff across the college and forms and information that is kept at the main site is now available for printing in each residential unit as required rather than being photocopied and ferried to the outstations.

The college operates the Databridge MIS for Specialist Colleges, which is capable of collecting analysing and delivering reports and student information through the college network. Until now the benefits of this system have not reached the residential units, where staff have had to complete paper forms and have not had access to the database. Regular use of the system is expected to improve the experience and expertise of staff across the college and to lead to the increased use of technology across the college.

## ***Henshaws College of Further Education***

### **Background**

Henshaws College is located on a 12-acre rural site on the outskirts of Harrogate, North Yorkshire. The college forms part of Henshaws Society for Blind People<sup>3</sup> (HSBP) a registered charity formed in 1837. The society as a whole provides a range of services to blind and partially-sighted people in the north of England and North Wales.

The college is a national specialist residential FE college for blind or partially sighted students. The students are recruited nationally, with the large majority from the north of the United Kingdom. All students have disabilities in addition to their visual impairment, including autistic spectrum disorder, epilepsy, cerebral palsy and hearing impairment.

The curriculum aims to provide knowledge and skills to support independent living, including residential skills, leisure and fitness, and pre-vocational and vocational work skills, including work placements. Students can also access a broad range of therapy services. Work experience is an important part of student life and while some external placements are possible,

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<sup>3</sup> [www.henshaws.org.uk](http://www.henshaws.org.uk)

opportunities are closely mapped to student abilities. Within the college, a café, a retail outlet and specific placements ensure that students are presented with realistic opportunities.

The college has residential capacity for 65 students. There are approximately 100 full-time teaching and administration staff, and between 100-150 full and part time enablers. There is quite a high transference of staff in the college from enabler to teaching roles.

All students are LSC-funded with additional support for college activities provided by the HSBP charity.

The college is overseen by the HSBP Board of Trustees whose members includes the Principal, who is actively encouraging the use of performance targets and benchmarking with other colleges in the region and nationally.

### **Use of technology**

There is at least one networked PC in each teaching area and all six residencies. Every administration office has at least one PC. There is an IT room with 12 PCs and assistive technology, and others across the college. The work centre and skills for life areas have PCs that can accommodate overflow.

All staff and students have access to the network and email. Previous use of a common drive and shared folders has recently changed with the introduction of a corporate HSBP intranet. Information is managed through an in-house database which tracks basic skills weekly and session targets. The database shows the student distance travelled, through tutorials and termly student reviews linked to a RARPA-compliant online document that can be used to inform parents and funding agencies.

The college has been involved in testing NLN materials and works with several providers in the field of accessibility.

Technical support, including ILT and use of assistive technology is provided by a small team adjacent to the IT suite during the working day, and by enablers out of normal office hours.

The college has an ILT champion working across different curriculum areas. Staff development needs are identified through appraisal systems and teaching observations, and optional twilight staff development sessions have been provided. Staff development days are used for IT/ILT, especially for enablers, and are arranged around student off campus time.

### **The Innovation Project**

The driver for the project is the change in kitchen technologies available to assist visually impaired students, such as talking microwaves and talking scales. Currently the college has a bank of audio cassette tapes, which contain step-by-step instructions for making prescribed dishes. These have been set up for some time and are now found to use outdated measures and techniques. They also need reviewing to take into account changing cultural requirements and tastes and increased awareness of dietary issues such as nut allergies, and need to be revised for presentation in different formats including Braille and large print.

The teaching kitchens are separate from the residencies, and have up to eight student work areas with separate cookers, workspace, talking microwaves. Some have height adjustable wheelchair accessible benches

The aim of the project is to create a new bank of audio resources for students use, updated as described above but also to take into consideration file format and ease of use for students as well as the suitability of technical equipment for use in a kitchen situation.

Working with several students simultaneously, all following different recipes, with instructions being played out loud can be challenging and distracting for both staff and students. Wireless headphones can be a concern because they restricting hearing what is going on in the rest of the class and that lecturer cannot hear the instructions that the students are following. The project team is liaising with the internal IT services team and their local RSC to capitalise on existing expertise and check the feasibility of what is proposed for the context in which the resources have to operate.

The project team also wishes to explore the use of MP3 players. Factors such as how students listen to music currently on CD and their potential familiarity with the Windows Media environment may influence their preferences.

### **Benefits and future plans**

The impact of the project is to extend the curriculum to full 24/7 status in terms of the requirements for independent living, and to facilitate the integration of the taught curriculum with students' independent lives. Campus opportunities can then help with the transition to future living. Plans include an e-learning programme for six members of staff to use the technology to enhance teaching and to disseminate to others.

The college participates in a volunteering scheme which has been very successful in raising the confidence of students and has opened many new opportunities to them. Recording of evidence has been an issue and college would now like to consider use of sound files as ways of gathering anecdotes and success of trips and events, which are seen as an important opportunity for students to contribute to society.

### ***Hinwick Hall College of Further Education***

#### **Background**

Hinwick Hall is part of the Shaftesbury Society<sup>4</sup>. Established as a home for boys before the Second World War, it subsequently became a school and then became a college. The main building is a mansion house set in parkland in a rural setting near Wellingborough.

The college provides further education for students with physical difficulties. Most also have either learning difficulties or behavioural issues, and some complex communication issues.

The college has the equivalent of about 150 full-time staff and currently has 53 students, all but one of whom are in residence on the site. All of the students are funded by the LSC, with some receiving additional local authority funding.

#### **Use of technology**

All staff and students have access to PCs. Staff use them for administration and for storing information and digital photographs. Students make use of PCs for their coursework and as part of their leisure activities.

All staff and students have college network and email accounts. The college makes extensive use of IT, including its finance system, database of staff training activities, student progress tracking and management information system, email system and systems to log phone calls and to carry video monitoring across the network. The college network is extended by wireless connections to reach into all of the residential areas and all new buildings are provided with wired connections. Students are enthusiastic users of technology using it to carry music and video, and some have their own web space on the system. Some students have their own equipment and laptops.

PC and software support for specialist applications is provided by the network manager and the TechDis part-funded technician from a neighbouring college. Staff also have access to help cards on the use college software.

#### **The Innovation Project**

Most of the students at the college have movement or communication difficulties, many of them severe. These students find it difficult or impossible to operate the gadgets that are an increasingly normal part of modern teenage life such as MP3 players, games consoles and computers. In the past, technical staff have modified the students' own PCs so that they can fulfil most or all of these functions. Students have then been able to share the benefits with their peers. But when the student leaves the college then so does the equipment and the benefits. This project is to build some mobile equipment to replicate these functions.

The project aims to build mobile cabinets with a range of equipment and software to fulfil two main functions. Firstly this provides a mobile interface that allows student to play and share their own music video and games held on the colleges central server, and secondly it provides a multimedia computer complete with projector and sound files that can be accessed by students to provide an extra resource in classes anywhere in the college.

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<sup>4</sup> [www.shaftesburysoc.org.uk](http://www.shaftesburysoc.org.uk)

The first prototype box and equipment has been assembled with suitable software to enable students to access their music and videos. MP3s belonging to students have been placed on a restricted part of the college server, enabling the selection of tracks through software and delivery via the college wireless network. Music videos and games can be delivered in the same way. The box is on castors for movable use, and has a touch screen on a manoeuvrable arm that can be placed in the reach of students in wheelchairs at various heights.

### **Benefits and future plans**

The benefits of this project have already been proved, giving students independent access to the kind of music and activities that are part of normal teenage life, and the project aims to make the advantages available on a more consistent and long term basis. It will also provide accessible workstations that can be used in any part of the college to augment existing provision.

The interfaces that allow students to operate music and video content are the same as those they use to access e-learning materials, so the more the interfaces are used, the more general facility with technology the students develop. The college plans to develop a web-based front end for this system that will enable both music and learning objects to be accessed directly and simply by students.

This project recognises the importance of enabling young people with disability to do what every other young person does, and to do it for themselves, not have it done for them. The project will make sure that all students have the advantages previously available to a few and that the opportunity will be available to future students.

## ***Homefield College***

### **Background**

Homefield College was established as a long-term residential home for young people from the autistic spectrum and or learning difficulties. It became a college in 1996 taking students on two- and three-year courses in addition to the long-term care that is provided. It is situated in a large residential estate in the village of Sileby, between Loughborough and Leicester.

The college specialises in students with autistic spectrum disorders and/or learning difficulties. Some students have Down's syndrome and various other conditions, including some challenging behavioural issues. All the students are funded by the LSC and some have additional local authority funding.

The college currently has 26 students funded by the LSC, most of whom are residential. 104 staff are employed, most of whom are full-time and who also care for the 24 long-term residents. The residential provision is in a house on the main site and in another house a few miles away.

The college started as a privately owned establishment but is now run as a not for profit company and intends to seek charitable status.

### **Use of technology**

All staff and students have access to PCs, email accounts and access to web mail. Computers are mainly used by staff for recording student information and tracking progress. The system is also used for writing with Makaton symbols. Students make use of email and online lessons.

The college network is connected to the JANET academic network, and use is made of the JANET web filtering system. The College uses an IT-based accounting system and the Databridge student tracking and monitoring system. The MIS database is accessible by broadband connection and VPN in each of the residential houses so that staff can update student records in real time. The college also uses standard office software applications and utilises shared calendars.

Technical support is supplied by a TechDis part-funded technician, who is able to offer help and advice to both staff and students with hardware and software issues on a one-to-one basis. Staff development is provided through a programme that includes basic IT training in the evenings for staff.

### **The Innovation Project**

The college has a garden with sheds and a polytunnel which is part of the larger garden of one of the residential houses. The students and tutors working in the garden have no access to the internet, and tutors cannot access the college databases and information systems from these locations.

The aim of the project is to provide access throughout the garden via a link from the router in the main house. The current wireless router does not provide sufficient power to reach the end of the garden, so the project is setting up a direct wireless link to the end of the garden. A toughened laptop computer and equipment to utilise the connection have also been provided. The link is made by the use of two directional aerials mounted on the house and the garden shed.

The aerials have been installed and are working and a connection has been made between the main house and the garden shed. Staff are able to update student records from the shed and from the polytunnel. The link is reliable and is capable of carrying the connection to the college database via the VPN connection.

### **Benefits and future plans**

The project has enabled the tutors who work in the garden to receive emails about students at the same time as other staff and to interrogate and update the MIS system from wherever they are in the garden. Garden staff have been excited to have the connection and have plans for its future use.

When students working in the garden find a pest or a weed that they do not recognise, they can use the laptop on the spot to research on the internet. They can compare the images to make a reliable identification and identify the correct remedial action.

[PHOTO – LAPTOP IN USE IN POLYTUNNEL]

### ***Lindeth College of FE (& Arden College)***

#### **Background**

Both colleges are associated with Craegmoor Healthcare<sup>5</sup> provision. Students have a variety of learning disabilities, with Lindeth students at Milestone 8 to entry level 3 and Arden students ranging from Milestone 3/4 to level 2.

#### **Use of technology**

Arden College has a part-funded technician, in addition to other technical support.

#### **The Innovation Project**

The REACT software application was designed in the 1990s by Propeller Multimedia Ltd<sup>6</sup> as stroke rehabilitation software for users to relearn language skills. It was originally recommended to individual clients through stroke support groups, NHS referrals and speech and language therapists and subsequently discovered to have an application for speech and language development within Specialist Colleges.

The aim of the project is to redevelop the software to best suit the needs of the college in terms of skills for independent living and communication skills. React 2 can then be introduced as part of a course and an ILP target, rather than an extra curricula activity as now, to motivate and develop students' listening and language processing skills.

The developers have initially concentrated on front end work, with revised menu structures and operational structures. The content management system (CMS) has been designed so that additional content can be included at a later date if required. Five key areas are addressed: auditory processing, visual processing, semantics, memory sequencing, and life skills.

Activities have been redesigned on a hierarchical linguistic base using a vocabulary system which is linked to other systems. This allows student assessments to be matched more closely

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<sup>5</sup> [www.craegmoor.co.uk](http://www.craegmoor.co.uk)

<sup>6</sup> [www.propeller.net](http://www.propeller.net)

to activity. A key benefit for the supporting tutors is in understanding the student's ability to process single words and to complete words through visual processing. An immediate possible development is the creation of worksheets as an alternative activity for some students.

A demonstration CD has been produced with approximately twenty activity samples covering the five key areas. The new software will be available free of charge to Lindeth and Arden and at a preferential rate to other educational users.

### **Benefits and future plans**

A main driver for the project was the successful use of REACT with students. Having set students individual activities, learning support assistants found that students were motivated to keep working, without necessarily realising that they were involved in a learning activity.

The result was not only increased motivation but also increased levels of concentration. Students appeared able to focus only on the sounds of their own PC rather than the noise around them, which is recognised as a skill for life. Extension of the use of the programme to a larger number of students can aid students speech and language development, in addition to motivation and concentration skills.

Many of the benefits of the new software will help the colleges to meet RARPA initiatives. In terms of staff administration, the facility for the language therapist to complete assessment and match activities to need was a significant development both in terms of time saving and recording achievement. Linking to the student ILP will allow wider knowledge of information and may well lead to other uses with additional groups.

### ***Linkage Community Trust***

#### **Background**

Linkage College is part of the Linkage Community Trust (LCT), a registered charity established in 1976. LCT recognises that for many people with varying degrees of learning difficulty there is a shortage of appropriate support for them to lead creative and purposeful lives in the community. It opened its first campus at Toynton in rural Lincolnshire in 1979, and due to demand opened a second campus at Weelsby in Grimsby in 1982.

Linkage College offers students a range of vocational and work experience opportunities, and a comprehensive and progressive programme aimed at developing social and independent living skills, basic education and key skills. Subject specialisms include horticulture, catering, car valeting and retail.

There is a strong emphasis on the integration of students into the community. Local facilities including colleges, work experience placements, sport and leisure venues are accessed fully by Linkage College students.

The college considers applications from people with varying degrees of learning difficulty, speech and language difficulties, visual impairment, hearing impairment, epilepsy or physical disabilities. Those students with more severe and complex needs are usually based at the rural Toynton Campus, whilst more independent students reside at the Weelsby Campus.

Linkage College employs 440 staff and caters for 206 students. The majority of students are residential, with just 8 day-learners at the Toynton Campus and 7 at Weelsby.

The college is primarily LSC funded, with 95% of its income coming from this source. Additional funding is provided by Social Services.

Linkage Community Trust is governed by a board of directors, providing the college with land, buildings and money for equipment. The college has an internal board of six directors.

#### **Use of technology**

Between 150-160 staff have recently been issued with laptops. In addition, each teaching room is equipped with at least two PCs, for use by staff or students. Toynton Campus has an ICT suite consisting of eight PCs.

There is a college network available to all staff and students which can be accessed remotely. All residential buildings are connected to the internet either through the college's JANET connection, or through a broadband connection.

All college accounts are managed with an IT-based system. Databridge was initially used by the college for student tracking, but poor infrastructure obstructed progress. This has now improved with the college receiving a second JANET connection, and a roll-out of the latest version of Databridge is planned.

The college employs an IT manager and deputy manager, and several IT technicians, including six at each of the two college campuses.

An ICT staff trainer has been appointed, and there is an ILT coordinator post at each campus. Staff are given the opportunity to do CLAiT, and there are two drop-in sessions per week to assist staff with any ILT issues.

### **The Innovation Project**

The main driver for the project was the realisation that there is a shortage of interactive ILT resources suitable for students with learning difficulties, as resources of an appropriate level are not usually age appropriate. With this in mind, the project is developing ILT teaching resources to promote the embedding of skills for life provision across the college curriculum. It also promotes the effective use of ILT within teaching and learning and the sharing of good practice among staff, and is generating general interest and enthusiasm for e-learning.

Resources have been created following requests from teaching staff across various curriculum areas. All resources and games have been made available on the college intranet, and are accessible to staff and students at all times. Regular email updates give details of new resources and where they can be found. It is hoped that this will result in more resources being used across the curriculum, and also by residential staff. Some of the resources have already been widely used and reused across different curriculum areas.

One challenge for the project is keeping the momentum going. Staff need constant updates about the service to remain aware of and interested in the resources. In addition, they need to be trained in how to produce their own resources. Student reaction has been positive, and indicates that covert learning is taking place. Subjects which may have traditionally been seen as less engaging, such as numeracy, now have an element of fun which encourages students to learn. Additionally, the interest of tutors in the use of ILT has increased.

### **Benefits and future plans**

Overall, the project is considered extremely successful, having improved communication and group work among students and with tutors. The project has increased tutor interest in the use of ILT by introducing useful and relevant interactive resources. Training may be provided to enable staff to produce resources of their own. This should result in the cascading of ILT skills across the college, and the production of many more resources that could be shared via the college intranet.

The use of PowerPoint has made production relatively straightforward, but means that functions are limited. In the future it is hoped that resources may be made using alternative software. The college is keen to incorporate more e-learning, and is particularly interested in the use of alternative learning technologies, such as mobile phones and digital cameras. Plans for several improvements are being discussed.

All residents have an individual learning plan which they are encouraged to update with their support worker. Linkage College is currently liaising with software manufacturers to enable students to produce electronic versions of these learning plans. The Linkage College Digiprofiling Project is also underway, which produces electronic records of achievement for students, consisting of text, photos, audio and video clips.

Linkage Community Trust have a new development in Skegness for more independent residents. In the longer term it is hoped that a new ICT suite at this development will be used to deliver courses such as CLAiT. This would allow the Toynton Campus ICT suite to be dedicated to accessibility and assistive technology, to support the development of those students with more severe learning difficulties.

The Linkage College Innovation fund project provides exciting alternatives to traditional learning activities. The availability of all new interactive resources in each classroom means that staff and students have immediate access to additional materials. The resources encourage group

work amongst students and can also be used to consolidate learning at the end of a topic. The college recognises the importance of building on the enthusiasm for the use of technology to support learning and teaching that the project has helped to develop in staff and students.

## ***Minstead Training Project***

### **Background**

The Minstead Training Project (MTP) was founded in 1987 and is an independent charity providing education and training in work, life and social skills for people who have learning difficulties and/or disabilities. MTP has 14 residential and about 36 day places and is located close to the village of Minstead near Lyndhurst in the New Forest. Students are involved in the production of plants and vegetables and in the maintenance of a large garden that is open to the public. There is a woodwork shop and a small pottery where items are made for sale by the students. Students are also involved in catering both at the open garden and for the conference centre on the main site.

MTP provides residential and day services and operates within properties owned by the Selwood Charitable Trust. It caters for young people with learning difficulties/disabilities and aims to enhance student's quality of life, and develop maturity, confidence, responsibility and independence.

There are currently some 50 students of whom five are funded by the LSC and the remainder mostly by local authorities or direct funding, with additional support from the charitable trust. The 14 residential students live in the lodge itself and in another house on the site. There are about 50 staff, mostly part time.

MTP has a Board of Trustees, and operational management is provided by a senior management team and team leaders.

### **Use of technology**

There are six standalone PCs with a networked printer in the IT centre and other computers in the garden room and in the open garden. Other PCs are used for administration in the MTP offices.

MTP does not yet have a networked system. Student progress is recorded on paper forms that are then transferred onto computer for storage and printed out for records purposes.

The project has access to an outside contractor for support and technical issues that cannot be resolved by the IT tutor.

The use of IT and technology has been steadily developing in the college, especially the use of digital photography by tutors to capture student progress in the practical activities. The policy for IT development in the college is to nurture the use of technology slowly and subtly by demonstrating the advantages to staff and students.

### **The Innovation Project**

The aim of the project is to provide presentation equipment and software for use in staff training and by the students for presentations relating to their work and for use in their leisure time. This includes the installation of a projector, control equipment and screen.

It is intended to involve students in making presentations to demonstrate their progress with work activities and to showcase their achievements to other students and to their parents. This is part of a wider aim to give students more input into keeping records of their own progress and to help them find their own voice.

### **Benefits and future plans**

The installation of the new equipment and the software and staff training that accompany it form part of a continuing programme to develop the use of IT in all aspects of college activity. The project has helped to illustrate the role of IT in producing compelling evidence of competence, and of the value of practical computing skills for life.

MTP has a system of student passports where students make a record of their life and activities and their own progress. This is currently printed out for students, but in future it is hoped to

incorporate digital photographs and video clips and to assemble the passport as an electronic record for students to keep and use to illustrate their experience.

## ***National Star Centre College of FE***

### **Background**

Situated in a rural area on the outskirts of Cheltenham, National Star College opened in 1967 to meet the needs of young people from across the United Kingdom with a range of physical disabilities. Students have physical disabilities and/or acquired brain injuries, alongside associated learning, behavioural, sensory and medical difficulties.

The full-time educational provision includes a range of pre-vocational and vocational programmes at foundation and intermediate level, and a few at advanced level. Programmes are offered in visual and performing arts, information and communication technology, business administration, health and social care, sport and recreation and preparation for life and work. Almost half of the learners are studying on entry and pre-entry level programmes.

The college provides for 148 residential and 12 full-time day learners, all of whom are aged between 16 and 25. It also offers ACL provision to adult day students with disabilities. It employs 461 staff, including speech and language therapists, physiotherapists, occupational therapists, assistive technology specialists and nursing staff.

Residential accommodation is available in student houses at the main site and in Gloucester and Cheltenham.

The National Star College is part of the National Star Centre for Disabled Youth, a registered charity and company limited by guarantee. The students are largely LSC funded, with occasional private, charitable, and social service referrals. A board of governors, who are also trustees and directors, oversees the work of the college.

### **Use of technology**

The college has around 300 PCs across its residencies and classrooms. Some interactive whiteboards have been installed, and student preferences are acting as a driver to encouraging teacher use.

The website has recently been redesigned. The college intranet is accessible from within the college only. An in-house management information system called Starbase is in use.

IT support is available during the working day. An assistive technologist is employed to support the use of IT both for staff and students, and a wide range of equipment and solutions, both bespoke and off the shelf, are available. The part-time ILT champion also supports staff and students with the application of ILT. Staff development provision is planned strategically and opportunities are available to all staff, full and part time.

### **The Innovation Project**

The project has developed as a result of a pilot staff development activity which identified a range of training needs to accommodate the different needs of large numbers of full and part time staff with very varying roles, including academic tutors, residential carers, therapists, drivers, and medical staff.

The aim of the project is to promote and provide staff development training sessions in the use of technology. Staff development materials are stored on network drives, and the uploading and retrieval of materials is learned as part of sessions to encourage staff with this process and way of thinking. Access to the Moodle VLE at a neighbouring college also enables flexible access to materials and resources.

At the end of the project, staff will be more proficient in using ILT and better equipped to meet the needs of our students, ensuring that the students continue to enjoy their learning environment, whether it is inside the classroom or out. A programme of workshops has been developed which should result in the appointment of ten ILT Facilitators, who will continue to cascade training. New hardware will also be introduced to ensure that the new technologies are fully inclusive.

The project has caught the imagination of more members of staff than originally envisaged, with representation from various roles and areas of responsibility across the college. This has required additional staffing and budget and has also resulted in some peer support. There has also been higher than anticipated interest from students, many of whom have demonstrated levels of existing IT skills that have surprised some staff.

### **Benefits and future plans**

Staff skills are increasing, as is their confidence in using ILT. The project provides the opportunity for the appointment of ILT facilitators across the diverse range of college roles, thereby ensuring that all staff have first-line access to ILT training, support, encouragement.

Students are benefiting from the appropriate use of ILT, with more interactive learning and differentiation to cater for a diverse range of learning needs, styles and pace. It is recognised that the college is making genuine efforts to raise the use and profile of ILT, with student demand as a major driver.

Future e-learning developments may include the further investment in equipment, and monitoring the role of ILT facilitators to ensure that staff development progress is sustainable. In the longer term the college may wish to develop its own Moodle site. There are also plans to investigate the use of electronic diaries or portfolios of achievement that can act as an aide memoire for personal use and for communication with other audiences including career opportunities. The use of webcams games that can mirror movement to assist with occupational therapy is also being considered.

A measure of the success of the introduction of technology will be the breadth of impact across all the staff roles in the college and all aspects of student life. One of the keys to success in this project is the active engagement of college management in demonstrating the potential uses of technology to support various aspects of life and work in the college. The inclusion of different interests and abilities and role groups, from a mini bus driver who enjoyed photography as a hobby, but could use images for making seat belt instructions (which is crucial with wheelchairs) to a nervous technophobe teacher with little experience in imaging, has helped to ensure cross-college interest and uptake. Good practice in encouraging the use of network and shared drives is discreetly and effectively built into the staff development workshops.

## ***Oakwood Court College***

### **Background**

Oakwood Court is an independent specialist college, situated in a small seaside Devon town with residential and teaching provision on two sites. The college is part of Education and Care (Devon) Ltd.

Students have moderate to severe learning difficulties and may also have associated complex needs. These include challenging behaviours, autistic spectrum disorders, and speech and language difficulties. Around one third of students come from outside Devon, and the college offers 52 week residential care for students who can obtain joint funding from LSC and Social Services.

The curriculum provision is based around pre-vocational, independent living skills, some of which is accredited. and is a 24 hour curriculum including evening, weekend and leisure activities. All students have an opportunity to participate in the Duke Of Edinburgh Award.

There are approximately 70 full and part time staff, and currently 32 full and part time students, all residential. The college has three residential areas, one at Oakwood main campus, one at Fairfield (2 miles away) and small bedded units for more independent students. Allocation to residencies is based on the support that is required.

The vast majority of students are LSC funded (with occasional overseas students) but some receive additional Social Services funding that allows increased weeks of residential care.

### **Use of technology**

From five PCs three years ago, the college now has approximately 42, including some laptops. Of these, 22 are for student access on a continuous 24/7 basis. There is a maximum of four PCs in each teaching area.

Some students bring their own laptops with specialist software. The college aims for 'total communication' for parents and prospective students through videoing performances, activities and outings.

There is a shared folder system on the network for staff and for students, which raises issues of security, especially in terms of student use of data storage space and inappropriate sharing of passwords. The inadvertent deletion or moving of folders in the file management structure can negate the beneficial effects of the hyperlink driven systems used for MIS and recording student data.

Significant work has gone into creating a single document that is hyperlinked to various areas of folder structure. For example in basic skills and essential skills spreadsheets contain all possible student targets from which the tutor chooses six per student. These Learning Goals are then translated into an ILSP for the student, with MIS data, pen picture of student at arrival, after transition period and is updated to recording termly evidence of achievements. These files are sizeable and therefore breakdowns in the folder structures are costly.

The college has an IT coordinator, and a part-funded technician provides technical support on a part-time basis. Staff development includes provision for staff to undertake ECDL through a local technical college. Staff can access electronic materials through CDs and downloadable files.

### **The Innovation Project**

The project had three specific aims: to create a college website, to investigate the purchase or development of a staff intranet, and to investigate the use of a VLE for staff and students with access to age-appropriate learning materials. Increasing student use and engagement with computers and raised awareness of media-rich materials with graphics and animation has encouraged the college to explore the possibilities of repurposing NLN materials and other resources for use in a student-friendly learning environment.

The project also addresses the need for increased security and ease of access to files, which has benefits for accessing and gathering student data, tracking for business purposes, and also to provide access to student materials and enable online student communications to enhance and facilitate the college's 24/7 curriculum offer.

The website has been developed and launched. Areas that have been identified for future inclusion on the college website include links to local information for visiting parents, information on support associations, and an integral accessibility tool. The college has adopted a highly consultative approach to the development of the website and decision-making with regard to a learning platform, involving staff, students and other stakeholders including parents. They are also investigating the opportunities presented by technology to provide support for transition students, and in the longer term to offer courses on a remote basis.

Staff have been engaging with their local JISC Regional Support Centre and are aware of increasing interest across the sector in open source platforms such as Moodle. However, they also recognise the need to choose carefully a platform that will best serve the particular and very varying needs of their students.

As well as NLN materials, staff are also exploring the use of DfES embedded key skills materials. The project has helped to raise awareness of some of the possible applications of electronic resources and to inspire the imagination of staff.

### **Benefits and future plans**

One unexpected benefit of the website development has been the opportunity for students to maintain web pages of their activities and trips. This has provided a showcase for their progress and helped to develop their IT skills in a real-world context.

The college recognises the strengths of its partnership with other organisations and agencies, such as Connexions, Social Services and the RNIB, and is keen to demonstrate the achievements of the students as part of its Inclusion to Excellence aims.

The importance is recognised of considering carefully and reflecting upon college requirements before making decisions about the choice of a particular learning platform. The college sees a need for further experimentation and are engaging some interested teachers to assist their

decisions. A culture change in delivery, including the use of forums for sharing views and information across sites, can be an important part of a 24/7 curriculum, and motivated teachers will need to consider this potential to enable appropriate decisions to be made.

The scope of this project fulfils both immediate and longer-term aims of the college's e-learning strategy. These include developing a system that staff can utilise for access to their own staff development, while simultaneously considering its use in student delivery and integration with the college's MIS system.

## **Orpheus Centre**

### **Background**

The Centre is based in open countryside with large wooded grounds and a lake, close to Godstone in Surrey. Its community of 'apprentices' are largely physically disabled, with associated learning difficulties. Established as a charitable trust chaired by Richard Stilgoe, the Centre specialises in the performing arts. Its six core curricula are dance, drama, singing, music, music technology and multimedia. Life skills are taught on an integrated basis and basic and key skills are largely embedded in the curriculum. For example, literacy is addressed in song writing.

Barns have been converted to provide a performance space with capacity for 130. The Centre employs 40 full and part-time staff and has capacity for 27 residential apprentices. Each apprentice is allocated two keyworkers, a personal tutor from the learning team and a member of the support (care) team

Approximately half of the apprentices are LSC funded, some are funded by the charity, with support from local authorities, and some privately. The first LSC-funded apprentices were enrolled in 2003.

The Board of Trustees has responsibility for the strategic direction of the Centre, and the Principal has operational control. The chair of the Board of Trustees is also the Centre's Musical Director and has a substantial involvement in day to day events at the college.

### **Use of technology**

There are approximately 22 PCs across site for staff and apprentices. All administrative staff have their own PC, there are five for use within the learning team and four for the learning support team, as well as three laptops.

Apprentices can access a wide range of technology in the studios. There are eight PCs offering 24/7 access, all internet enabled, and a wide range of assistive technology was available.

The Centre has a networked server, and staff have designated areas and drives to use. Apprentices can also access their space 24/7 through specific drives/folders.

An external consultant has been commissioned to provide IT support, and the college has recently received support from a TechDis part-funded technician.

Staff development is identified through a process of appraisal. Most IT training is provided in-house. Many of the staff members have a performing arts background and their general level of IT skills is perceived as relatively high.

### **The Innovation Project**

The aim of this project is to provide a digitally recorded ILP for each of the apprentices as a record of their targets for each area of the curriculum together with the evidence that supports each target. Apprentices then produce a CD-ROM or DVD which is mastered and formatted to provide a comprehensive audio-visual record of their year at Orpheus.

The record is to be achieved by the supported use of Digital Blue video cameras, saving and editing evidence to DVD. Apprentices taking part have varying multimedia skills. While the learning curve is different, all of the apprentices involved attend the sessions as extra curricular activity and so receive the same amount of support

A key objective for the project is the involvement of the learners in their learning programme, which will lead to improved learning, greater understanding of the process, and more motivated, and engaged learners. Both staff and learners are actively aware of learners' core goals and

targets and encourage the teaching of these throughout the curriculum. The embedding of numeracy, literacy and communication across the curriculum is facilitated by raising staff and learners' awareness of the learning process. Learners have ownership of their ILPs and control over their own outcomes. The actual means of motivation is relevant to the learners, helping to develop appropriate audio-visual skills and supports the Centre's existing multimedia work. More generally, the project encourages staff and learners to have a positive, problem-solving approach to ICT.

Apprentices have been trained in the practical use of cameras. A lot of work and discussion has gone into agreeing the parameters for valid evidence. Apprentices have moved from an initial approach of filming everything quite indiscriminately, to fixing upon evidence that supported their learning. This has extended their forms of communication and challenged them to think about their audience.

Filming their experiences has also involved apprentices using the cameras to record one another in action, which has resulted in unexpected positive outcomes in increasing communication and support between peers, introducing an element of fun that is both infectious and confidence-building.

The project team has recognised that to encompass the richness of the apprentices' experience, staff training needed to be extended to include the support team who have responsibility for learning out of class time. The project has also encountered and addressed a number of practical issues relating to the use of the technology in this way, including battery life, device design, button manipulation, software incompatibilities and upload times. The recording of reflective diaries has also presented a conceptual challenge in developing understanding and a practical challenge in the ability of students to maintain privacy by recording themselves.

### **Benefits and future plans**

The project plays a key part meeting RARPA aims for the Centre and has had clear unexpected positive outcomes in terms of apprentice achievement, motivation and the ownership of their own learning. In the longer term, the Centre would like to extend the facility to all apprentices so that all had a permanent record of their achievement. Key to this development is the choice of correct equipment, and the project has helped to raise awareness of some of the practical and conceptual issues that will inform this choice.

## ***Pennine Camphill Community***

### **Background**

The college is located in a rural location on the outskirts of Wakefield set in 35 acres with a farm and garden. The community was established in 1980. Part of the network of Camphill communities, it caters for young people with moderate and severe learning difficulties and some mental illness, and focuses on providing activity-based courses for its residents.

There are about 44 full-time staff and six part-time some of whom live on site and act as house parents. Co-workers in Camphill establishments are volunteers who work directly with the residents.

There are 35 residential students and 5 day students. The residential students live in houses on site with staff.

Funding for students comes almost entirely from the LSC. The college also receives capital funding from the LSC to improve its facilities and accommodation.

The Community is an independent charity with a board of governors. Operational management is the responsibility of a senior management team of five individuals.

### **Use of technology**

All students and staff have access to IT and email accounts. There is a wide area network using Microsoft server technology. The system also runs SharePoint Services, Terminal Services, a local intranet and an electronic finance system. All except two of the buildings are connected by fibre and these two have radio links. The college has about 40 PCs and 10 laptops and has five thin client machines.

Most of the day to day IT support is provided in-house. Part of the reasoning behind the decision to install thin clients is to teach users how to reset and restart the PCs and thereby reduce the amount of support that is required. For more serious issues the college calls on an outside contractor.

### **The Innovation Project**

Learning is distributed all over the site and a consistent approach to technology and e-learning requires effective and easy access to the network. The access must fit the conditions around the site including barns and workshops.

The aim of the project is to increase use of the college intranet and IT resources by learners and to build on existing capacity to use monitoring and self-assessment of coursework and develop online portfolios. This has involved the installation of a server and thin clients. The second phase was to introduce IT as part of a college-wide process to carry a customised relational database to staff and students to enable the requirements of RARPA. The college recognises three different types of staff user: enthusiasts who want to use everything, those who will grudgingly use the technology for work purposes, and those who resist and need to be drawn into using it. An overarching aim is to encourage staff to help each other on a system that is as simple as possible. The college has always sought to increase the use of ILT amongst a staff complement to whom this presented some challenges, and has tried to implement an application of technology that would encourage all staff to use a PC. With this in mind, the vehicle booking system is now only available online.

Terminals have been installed in the college woodwork shop, the pottery and the stables. Further machines will be installed in the public area of the college in the student lounge area where their quiet running will be a key advantage. All the machines are well used and are fulfilling their key objective of embedding the use of ILT into these areas of the college. There have been some technical issues but these have now been largely overcome. Most staff have increased in confidence in their use of technology and the ability of staff to reset the machines to roll back to a 'known good' configuration has helped to boost confidence.

### **Benefits and future plans**

The college wants to embrace RARPA and sees the competent use of technology by staff as the way to achieve this. They are planning to purchase a MIS/database system to enable student records to be kept online and for recording student progression throughout the college. They hope that by using this system they will be able to export reports ready completed from the database rather than having to complete written reports on a termly basis. They are looking into using online portfolios with students in order to involve them in making records of their own progression. Students are becoming enthusiastic users of IT, and the college recognises it will have to provide more points of access in residences for students in the evening since at the moment there are queues for access.

In keeping with the ethos of the establishment, the college is interested in using technology to enhance its activity-based learning approach. Staff have been encouraged to think of innovative ways of using technology to support learning, and while progress has been slow there have been some positive developments. These include plans to involve students in an online system to order and purchase supplies from a local wholefood cooperative.

## ***Queen Alexandra College***

### **Background**

Queen Alexandra College is located in Harborne in the southern part of Birmingham. The college has developed from the original Birmingham Royal Institute for the Blind, established in the 1890s as a residential home. It specialises in providing vocational training for students with medium to high levels of visual impairment in conjunction with other physical, learning or behavioural difficulties. The college has fully functioning woodworking and sign-making shops, and a large engineering department teaching the use of numerically-controlled machine tools.

The college employs about 150 staff of whom about 35 are part time. There are 135 students of whom 96 are residential. The college site encompasses the residential units occupied by the

students. It caters for a very wide spectrum of abilities ranging from entry level to associate students who are enrolled at another college or university.

The college is funded by a combination of the LSC and RTU (Residential Training Unit). It is a charity overseen by a board of governors, and managed by a Principal, Vice Principal and college management team.

### **Use of technology**

There are about 220 PCs on the site of which 160 are for student use. Some staff have laptops. All staff and students use the PCs as their 'eyes and ears', and all communication and all applications are accessed via PCs hosting the assistive technology that the college uses.

There are separate networks for staff and students. The staff network includes the college MIS system (Facility CMIS) which has been modified to produce fields suitable for use in a specialist college. This system produces the timetables for the college. The college finances are also managed using an electronic system.

The college has a newly built Karten CTEC (Computer-aided Training, Education and Communication) Centre<sup>7</sup> (part funded by the Ian Karten Charitable Trust) which provides learning centre facilities for the students.

Technical support is provided by two technicians and by a resource assistant who deals with the maintenance and installation of software and assistive technologies.

Staff development is ongoing and concentrates on the provision of training in the use of the specialist assistive technology software used by the College. Training is also regularly provided to skill staff in the use of IT using CLAiT.

### **The project**

This project marks a radical change for the college. Traditionally students have been taught in classrooms and workshops without a blackboard or whiteboard as the focus of the room, the assumption being that these aids were not useful to blind students. However, very few students have no eyesight at all and the college is looking for solutions to provide more differential delivery.

The main driver for the project was to improve the use and scope of IT in classrooms by more use of both visual and audio media and by encouraging cooperative working between students. The project provides two interactive whiteboards and fitted data projectors with SynchronEyes™ classroom management software<sup>8</sup> which allows the contents of the whiteboards to be also broadcast to each client machine in the room. The project also provides staff training in the use of the whiteboards and software.

A great deal of interest had been shown by staff in the project even before the whiteboards appeared in classrooms. Staff see the opportunity to provide more differentiation in classes where students are heavily dependent on PCs and the assistive software installed on them. The boards can provide a central focus for a whole class or for a subset working on a specific project.

### **Benefits and future plans**

The project enables students to improve their communication skills by encouraging small group working. Students at the college are very used to working on their own using a PC with assistive software to interpret content. Staff are also keen to try out the interactive possibilities of the whiteboards with students at entry level.

The college already uses a lot of e-learning materials with students. Staff are aiming to widen the impact of the materials by using visual and audio stimulation and by improving cooperation and group working. They are reasonably confident that the current project will be the start of a lot more use of this type of technology.

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<sup>7</sup> [www.ctec.org.uk](http://www.ctec.org.uk)

<sup>8</sup> [www2.smarttech.com/st/en-US/Products/SynchronEyes+Classroom+Management+Software/](http://www2.smarttech.com/st/en-US/Products/SynchronEyes+Classroom+Management+Software/)

## ***RNIB Vocational College Loughborough***

### **Background**

The RNIB College is based on a shared campus with Loughborough College of FE and Loughborough University with on the outskirts of the town. It caters for students with a wide range of abilities. The college was established during the Second World War due to demand for switchboard operators, typists and secretaries. As employment patterns changed it began to train computer programmers.

The RNIB College accepts students from the age of 16 onwards. Some, but not all, students have a sight loss, and many have more than one difficulty or disability including chronic illness, hearing loss, learning difficulties, physical mobility difficulties, mild to moderate mental health issues or mild to moderate autism; including Asperger's syndrome.

Provision is designed around the specific needs of the individual. Specialist support is available on a wide range of mainstream FE courses at Loughborough College as well as in-house learning opportunities for some students. A diverse range of courses includes short, individually tailored courses on preparing for return to employment and updating technology skills, twelve-month employment-focused programmes on subjects including information technology, travel and tourism and health and social care, and mainstream FE programmes including GCSE, AS/A levels and vocational courses.

The college also offers support in developing independent living skills. Students may choose to get involved in Team Enterprise; where they are required to set up and run their own company or undertake appropriate external work placements.

There are around 30 in-house students, and another 40 based in Loughborough FE College. The majority of these students are full-time and residential. In addition the college supports around 100 students in other centres throughout the East Midlands.

Approximately 130 staff are employed at the college, of whom around 40 are full time.

The majority of funding is through the LSC and the Residential Training Unit (RTU). The college also receives a subsidy from the RNIB, and some short courses are funded by Jobcentre Plus.

Curriculum teams are supported by team leaders, who in turn are managed by a college management team. The Senior Management Team has overall responsibility for the running of the college.

### **Use of technology**

Students all have their own workstation within the college. In addition, there is a base room equipped with PCs at Loughborough College for RNIB students, plus open access rooms in both colleges. There is a classroom equipped with PCs in the residential building and internet access available in study bedrooms for students who supply their own computers. Loans of laptop computers are also available.

The majority of staff also have a workstation, although some trainers use the classroom PCs. All staff and students have roaming profiles, so do not need to adjust settings if they log on to a different PC across the campus.

Financial records are managed through an electronic system which is linked to the RNIB corporate system. Student and staff records are managed through a central database. A college intranet is also in place for use by staff and students.

Technical support is provided by a Senior Technical Resource Officer, a Technical Resource Officer and a Network Manager.

The Quality Manager is responsible for the annual staff development programme, which includes IT/ILT training. Additional training not included in the structured programme is also available on an in-house ad hoc basis.

### **The Innovation Project**

Learning resources are currently given to learners on analogue tapes and played with tape recorders operated with foot pedals and buttons. This medium makes it difficult for learners to search for a topic, skip sections, move back and forth between topics, but has been the best available to date. The college is in the final stages of converting its learning resources to digital

audio format. Learners have been severely hampered by the lack of a player for audio files that would allow them the same ease of use of tapes and have the navigation features listed above. This is especially important when they are trying to play ICT teaching materials, as the available software cannot work in the background, thus requiring learners to move between applications. The aim of the project is to take a specialist Daisy player (Ease Reader) and work with the supplier to adapt it for use in an educational setting, converting the college's ICT learning resources to e-learning Daisy books to trial with this player and collect feedback from staff and learners.

The project team has been working with the software manufacturer to develop Ease Reader for use with a foot pedal. The software has also been adapted to work in the background, allowing learners to remain in the application or document they are working on.

Ease Reader has been installed on the college network, and is available to all staff and students. Staff training sessions have been held for adult trainers and FE teaching staff. Instructions for using Ease Reader have been developed and made available to staff and students. In addition, some lecture notes have already been converted to Daisy format. Testing has identified a number of potential improvements to the system which have been referred to the developers. Although the use of Ease Producer would significantly reduce the costs of creating audio learning materials, it brings a new set of problems due to problems with pronunciation and issues surrounding punctuation.

### **Benefits and future plans**

The project will result in a fundamental change in the delivery of teaching throughout the college. All resources are currently available on audio tape, but will eventually all be converted to Daisy format. This will allow for all resources to be networked, improving their accessibility.

An unexpected outcome is that FE teaching staff have been more enthusiastic than was anticipated, and can see uses for using Ease Reader in non IT-based subjects. They have been keen to be involved in the production of audio books, and are likely to make use of Ease Producer to create short sections using synthetic voices.

The college already makes extremely good use of ILT, and has few plans for further development. A new operating system and updated versions of Microsoft Office will be installed at some point in the future. The college also plans to make more use of video and audio streaming for students.

Staff feel that the project has helped to produce one of the biggest change in learning methods since the college was opened, and will radically enhance the way that learning materials can be used. The use of the new format offers significant advantages to those with all kinds of reading difficulties as well as the visually impaired. Staff and students will be able to access resources remotely, which could have a significant impact on learning and teaching methods across the college. Unlike the traditional audio tapes, the quality of recording will remain consistent over time, and will be accessible to large numbers of learners.

## ***Ruskin Mill College***

### **Background**

Ruskin Mill College is set in a picturesque valley near Nailsworth in the Stroud valleys. The site covers both sides of the valley and includes a small river and fishery. The college was inspired by the thinking of Rudolph Steiner, William Morris and John Ruskin, and specialises in a craft-based vocational curriculum with a strong emphasis on rural crafts. Students have a very broad range of characteristics including learning difficulties, autistic spectrum disorders and some behavioural difficulties.

The college has about 132 staff most of whom are full time, 92 residential students and six day students. Most students live in the 36 staffed houses with a maximum of 3 students per house, ranging from houses with full time staff and 3 students to those where students are preparing for independence with only a staff member living next door.

Most of the students are funded by the LSC although there is some funding from local authorities, mostly for residential and holiday care.

The parent organisation is the Ruskin Mill Educational Trust. Each of the Trust's three colleges has a Principal, a head of education, head of care and a middle management team.

### **Use of technology**

All administrative staff have PCs and all senior and middle managers have laptops. Class tutors with responsibility for literacy and numeracy also have laptops. In addition there are PCs in classrooms and a staff resource area equipped with three PCs which are used for administration and by tutors for accessing the colleges records and for recording student progress. All staff have access to the internet and to the college email system. Students have access to a computer room and to computers in classrooms. They do not have college email addresses but many have web-based email accounts.

There is a network that connects all the Trust and college buildings in the valley. All senior and middle managers have broadband connections at home so that they can access the college network using VPN. The college uses an electronic accounts system and the Databridge student database and progress tracking system. There is a separate customised timetabling system that also produces the transport lists and the lunch lists, which the college is seeking to link to Databridge.

Technical support is provided by a Technical Services Manager and by a TechDis part-funded technician. Development and training sessions are held weekly, covering areas such as email, use of the database and filing systems.

### **The Innovation Project**

The aim of the project is to improve access for students in their house groups, and to increase their opportunities to access the web and college materials when they are at home. Four homes of different types and locations are being piloted with a view to extending the facility and forming a strategy for wider rollout.

The original intention was to use the Microsoft SharePoint Portal as a framework for carrying information to houses. As an initial step the simpler (and free) SharePoint Services is being tried to see if that will suffice. An installation of SharePoint Services has been made on a college server and a test machine located in the horticultural department has been installed as a client. To be successful, the system must be resistant to the efforts of students (intentional or otherwise) to disrupt the system. Connection is intended to be via VPN. Microsoft VPN connections have worked well but there are problems with local printer connections. The use of thin clients in the houses is being considered.

### **Benefits and future plans**

Staff are making use of the first pilot set-up in the horticulture department to access their materials and to get onto the internet. The college recognises that it must provide a system that is simple and robust and one that delivers what the users need. In order to ensure security of the whole network it is intended only to allow connection to the internet at the main site via the college's JANET connection and web filtering system. This project is the kernel of a wider move within all of the three colleges in the group to improve communication between residential houses and main college sites. Communication between teaching staff and house staff is difficult since they work at different times, and in these circumstances email is often a vital element of good communication. The project will provide a framework for rolling out into the other colleges in the Trust. Staff in residences are very keen to be involved in the pilot and recognise the improvements that will be possible.

The vision is to bring an effective connection to every residence and to every location where learning takes place, however remote. Opportunities to use the technology to start a vegetable box scheme involving students and to market the fish from the farm are being explored. All of these activities involve work by students in 'real life' situations and the college wants to bring on as quickly as possible the exposure of its students to this technology.

## **SENSE East**

### **Background**

SENSE East is a part of the national charity for the deafblind. SENSE was founded in 1955 to provide support for young people at that time deemed uneducable. SENSE East has a headquarters at Market Deeping near Peterborough and has small family sized units in the towns of Louth, Skegness, Peterborough, Bourne, Pinchbeck, Kettering and Dereham.

There are 104 residential places in 20 group homes spread over the east of England and about 25 day service users. 26 of these are students undertaking study funded by the LSC.

The organisation employs 140 day staff and the total staffing is over 460 FTE. In recent years larger residential units at Peterborough have been closed and replaced by smaller family sized units. New educational units are being brought into use including at Bourne where the project is based.

Most of the students also have behavioural issues associated with deafblindness. Students following a three-year course are funded by the LSC, while those who have finished the formal course are funded by their local Social Services authority.

SENSE is a national charity with a board of trustees. Each region has regional director and a regional management team. The Principal at SENSE East runs the organisation with the support of the regional management team.

### **Use of technology**

All PCs have access to the internet and all staff have access. Most senior staff have email accounts. Within the classrooms most machines are equipped with numeracy and literacy software. Standard school-level software is modified by tutors to make it suitable for students in the context of communication carried out by 'hand on hand' signing and similar communication methods. All software and educational materials have to be interpreted for students by staff. Administration and finance for the organisation is carried by an access based database system and student tracking is done using an in-house application written by a local supplier.

The national SENSE organisation has a wide area network which connects all its sites. All the new facilities have broadband connections which connect to the SENSE wide area network by means of a VPN connection hosted by an external provider. All administration staff have access to the network.

Support for the equipment is provided by one technical officer with help when needed from an external contractor. Staff development concentrates on the issues involved with communicating with the deafblind and interpreting information from any software or teaching materials.

### **The Innovation Project**

The aim of the project is to improve the use of switching technology in the new Bourne education facility to allow better access for students to learning objects and in particular to allow the use of cause and effect software with students to improve their interaction and responses.

A new set of equipment comprising new switches and switch connectors and a new laptop has been installed and is in use. One student has been provided with a tongue switch which is being used to initiate changes on the computer screen. Other students are using a touch screen with simple cause and effect type software. The use of touch screens has been of particular importance with these students now that a range of interesting applications are available.

### **Benefits and future plans**

Stimulation and the use of cause and effect can bring very large benefits for this group of students. For many the use of this technology presents one of the first opportunities they have to be aware of an event that they have initiated in the external world.

The college plans to use many more switches and computer with other students and residents. They hope to be able play a part in future developments for deafblind students through research projects with the University of Manchester. They are also interested in the development of a 'talking glove' that may lead to an communication system for the deafblind using the 'hand on hand' signing method of communication.

## **Thornbeck College**

### **Background**

Thornbeck College is located in an urban setting in Sunderland. It opened in 1994 as a residential establishment for young people with autistic spectrum disorders. Since then it has developed into a residential college with seven other houses used as residences in the immediate area, three workshops on a nearby industrial estate and a shop selling products made by the students.

The college caters for people with autism and Asperger's syndrome, providing programmes of non-accredited learning to suit individual needs. It employs 82 full-time staff and has 26 residential students and 11 day students.

The college is funded by a variety of agencies with funding attached to individual students. Most of the funding is from Social Services for students on life programmes, with other substantial funding from the LSC who fund students on education programmes. Some additional funding is also provided by health authorities, and there is also some funding from charitable grants.

The college is run by the Tyne and Wear Autistic Society which has a Chief Executive Officer and a board of trustees. Senior and middle management teams are responsible for most day to day operational decisions.

### **Use of technology**

All senior tutors at the college have laptops and all classrooms and workshops have PCs, as does the shop. In total there are about 20 PCs and 10 laptops. PCs are used for keeping student and other records for staff development and for the preparation of lesson plans. All staff and students have individual accounts on the college network and access to email. Students use the PCs for email to communicate with home and to produce a regular college newsletter. The college has an interactive whiteboard and projector, and is starting to use more online pictorial documents as a means of reducing stress for students who find reading difficult.

There is a wireless network connection in some areas and plans to connect remote establishments to the college network via broadband and VPN. The college does not yet have a database of student records, which are currently stored in word format on a secure server. The administration part of the parent society takes care of the administration and financial accounting for the college.

Technical support is provided by a TechDis part-funded technician. Local contractors have installed and maintained the present network. There are development action plans for each member of staff and a programme to provide tutorial and care staff with laptops on a team basis. The college has achieved Investors in People status.

### **The Innovation Project**

The college is aware that it needs to increase its exposure to computers and technology to allow staff and students to benefit from materials available in the wider world. In particular staff are convinced of the benefits to students with autism of exposure to music and the opportunities to produce it. They feel that this is an interest and ability that transcends the disabilities that these students have. They also want to increase the use of images which they feel are particularly effective with the learners.

The project aims to install new computers and some items of assistive technology in the college with a new multimedia computer to enable music production and recording software to be made available to the learners.

The college has bought and installed five new PCs and a multimedia computer and some assistive technology in a new music room in the college. Already the new equipment has enabled staff to produce learning materials to suit a much wider range of learning styles, particularly using sounds and images. The use of digital images is blossoming in the college and a room has been set aside for making and keeping students scrapbooks. Students record their own progress and interests using digital photographs and printed materials. Staff have recognised that the use of scrapbooks in this way is a spreading craze in many parts of the country and learners are highly motivated to make their own and capture their own images.

Combining images and sounds has particular value for autistic learners. Putting images on the interactive white board and then attaching sounds so that the sound is played when the image is touched has enabled major improvement in communication and involvement and has also encouraged a sense of fun that has a positive impact on learning.

### **Benefits and future plans**

The college is convinced that the use of music and images is an important way to engage their learners and that this can only be achieved and managed effectively through the use of this technology. The use of images and sounds in producing work from learners with few literacy skills will form a major part of future developments at the college.

## ***Treloar College***

### **Background**

The college was established as it is now in 1996, having a history since 1906 of a hospital funded by the Lord Mayor's Trust. It is located near the small town of Alton in Hampshire, and has close connections with the Treloar School and nearby Alton FE College. Students have a range of quite severe disabilities, the majority having cerebral palsy.

Currently, the college has approximately 180 students, with the vast majority receiving LSC funding, and most in residential accommodation. There has been a marked increase in the severity of disabilities and associated increased support needs in recent years, and Treloar has high percentage of very needy students needing support, both in terms of therapy, care and learning support. As the real cost of support increases with student need, the college increasingly finds that funding needs to be supplemented by additional means. Aside from LSC funding, a significant fundraising programme is in place with the Treloar Trust. A major lottery grant has contributed to the building costs of a flagship learning resource centre with an innovative storage system involving rolling vertical high level stacks that can be operated by a wheelchair user.

Both the college and the school are part of the Treloar Trust, a registered charity. The principal and governors manage the college on a day to day basis, with central functions such as finance human resources and IT being shared by the school and college. There is a board of trustees, comprising governor representatives from both school and college, and a Secretary who is also the Trust's Chief Executive.

### **Use of technology**

The college has over 230 PCs for use by the students, which is more than one per student, plus machines used for administration. Every classroom has one PC for each student. Boarding houses all have PC access and are wireless networked, with cable connections to the main college site. Many students come with own laptops and specialist software.

The Databridge MIS is used for managing student information. While the college does not yet have a dedicated intranet, use is made of shared folders and some standard documents for processes such as ILP.

IT technical support provided is provided during the working week on a shared basis with the college, school and Trust.

Staff development is organised through training days, based on analysis of needs from a staff appraisal system. IT development sessions are offered at varying times in short chunks.

## **The Innovation Projects**

### **1. Course information**

Due to recent changes in the syllabus and qualification system, necessitating the development of new handbooks and course information, the college has identified a need to revisit the ways it stores, accesses and retrieves course information.

The aim of the project is to provide a structural model for the development of HTML resources which can be used in vocational courses. This model will then be populated with standard data about the course structure and assessment and have components that allow the addition of

subject specific resources such as work sheets, assignments, information sheets, links to other sites and resources such as clip art. The model will provide the core for resources that will be included on any future intranet or VLE.

In light of very individual student timetables, due to high priority of allowing students to mix and match relevant modules to their taste, resources are quite specific and have low volume usage. A key element of the project is to facilitate access to course data for use by students and staff with a view to encouraging the further use and development of e-learning in the future. There has been some staff resistance to the collation of information in electronic format and the template structure being introduced is intended to provide staff with an easy method of doing so. A process of consultation and mutual collaboration has encouraged staff to engage with the process and feel a part of the decision making, and has resulted in a much more positive reaction to the introduction of the new approach than was initially envisaged.

## **2. Learning targets**

In the past, teaching quality inspectors have commented on the apparent lack of a holistic approach to planning student development and setting learning targets. While termly reviews were put in place, it was recognised that more use could be made of the Databridge system to provide an overview and systematic update of student progress. The aim of the project is to transfer all therapy targets into the MIS to allow more efficient recording and retrieval of individual therapy goals for students.

This represents a substantial change to the way the therapy department works, but savings in time and increased mobility are encouraging staff to engage with the technology.

## **3. Materials development**

Clicker 4 is a heavily used piece of software within the pre-vocational areas of Treloar. However, as it was developed as part of the National Curriculum it is aimed mainly at schools and contains age-inappropriate materials.

The launch of Clicker 5 has enabled new grids to be created, including images, video clips and sound. In this context, the project aims to develop a large bank of current and age-appropriate resources for use by both staff and students at the college. It also aims to develop resources for Clicker 5 and share these with Crick Software Grid users, and to ensure that staff at the college can use the resources and equipment effectively.

Staff development is crucial to success of the project. While there are issues with finding good quality, appropriate images, a greater concern is the creative time for staff to come to terms with the tool and develop their understanding of how its use can be embedded into sessions. Storing and metatagging images and resources have been identified as a challenge to be addressed.

## **Benefits and future plans**

Through these projects, the college is able to draw on best practice in developing its systems for organising, developing and delivering learning experiences. All the projects help the RARPA agenda. In the longer term, the main impact of the three projects lies in the use of technology to encourage independence as part of an overall context of lifelong learning, as an integral entitlement that empowers students and promotes equality of opportunity.