School use of learning platforms and associated technologies

Case Study: Secondary School 1

Contents

Secondary School 1

This case study is part of a suite of 12 case studies which inform the benefits identified in the main report and should therefore not be read as a stand-alone.

1. The school and the school community

The school is a non-selective community modern school for girls aged 11 to 18 with a mixed sixth form. There are currently some 820 learners on roll, with 90 in the sixth form. Approximately 13 per cent of the students are from minority ethnic backgrounds and the number of learners having English as an additional language (EAL) is higher than average (29 languages were identified). The main languages spoken other than English are Punjabi, Turkish and Bengali. Cultural diversity is celebrated at the school, particularly through the Curriculum Support Centre, and pastoral care is seen to be a key strength. Learners in Years 10 and 11 make satisfactory progress overall and good progress in English and maths. GCSE results are broadly average.

The school was awarded Technology College status in 1997 and acquired a second specialism in vocational education in 2007. The school makes innovative use of ICT and recently introduced an Opening Minds[1] curriculum in Year 7.

The school has strong partnerships with the wider community at both local and national level and has achieved many awards for its work with ICT. It has close partnerships with local primary and secondary schools and as part of that partnership, it provides curriculum and technology support to eight feeder primary schools as well as providing website, forum and ICT training for school-based initial teacher training and local community groups.

[1] http://www.thersa.org/projects/education/opening-minds

2. How the learning platform is used

The school has a long history of technology innovation and experience. It is an ICT Register school for the Specialist Schools and Academies Trust (SSAT) and has achieved many awards for its use of ICT. The school contributes to the TeachNet UK competition, with many staff members contributing digital curriculum resources for use by other schools. It was awarded the Becta ICT mark in 2007 and is a Becta Advocate school. The headteacher is also a member of the Becta Leading Leaders consultative group.

General observations

The school has adopted a commercial learning platform. This has an internal system (VLE) and an external facing extranet. Both systems are interoperable and are integrated with the school website. The school has been using the extranet to support the curriculum for approximately seven years and it is well established as a repository for resources that can be accessed from home, school and the community; it also uses a commercial Management Information System. The school views curriculum/learning and data management as two distinct systems and at present the MIS is intentionally kept separate from the VLE and extranet. However, the MIS is accessible via a secure area of the Learning Gateway via a link on the school home page.

Management and administration

The approach of the senior management team to new demands is a cautious but considered one framed by many years of experience and involvement in successive waves of technology adoption.

> *"It's about managing change. And within this process of managing change was understanding that people will come back. Initially they will say, 'Well, we can't do it' because they don't believe it's worth it, or they may say, 'We don't have the equipment'. So you provide the equipment. Then they'll say, 'Well, we don't have the appropriate software'. And this is not a criticism of staff at all, this is just management of change. So it's a constant process, which initially surprised me."* (ICT Consultant)

SMT believes technology must be fit for purpose:

> *"We're hugely committed to technology as a learning tool, but it is a learning tool and it isn't a panacea for changing education. I feel quite strongly about that. It is a tool, it's a great, fantastic tool but it is just one of many teaching aids."* (Headteacher)

The perception that technology is a tool has meant that senior management (and staff and learners) do not view the learning platform as something distinct or separate, it is just one part of a greater technology infrastructure that serves the learning community, a new phase in an already existing environment of technology innovation. Ten years ago, when the headteacher was appointed to this school, her vision was to use technology to transform school practices. Not having the technical expertise, she appointed individuals (amongst them, the ICT consultant) who could help her achieve this vision. The journey has been a learning process both for her and for the SMT, one that has led to a deeper understanding of the implications of technology adoption and use, and about change management and taking other staff members on board.

> *"We were a little naïve. When we started ten years ago, we thought that within a year we'd have it cracked. We'd have everyone seamlessly using superb computer equipment, doing the most interesting and innovative lessons based on that; using the interactive whiteboards, accessing things at home through the VLE, etc. And, of course, our initial forays were a little… they were sometimes rebutted, because whilst our ambition was there, the reality of staff ambition was initially way below ours."* (Headteacher)

During this period of change, the headteacher implemented a distributed leadership model that focused on expertise. She invested in staff training (and especially in-house training). Dedicated ICT leaders were brought on board to focus specifically on school technology developments: a full-time ICT consultant (who was formerly a teacher at the school), a part-time e-learning support manager (two days per week), an e-learning manager (allocated time), a full-time IT technician/network manager and a data manager (allocated time). The e-learning manager (a history/sociology teacher) and data manager (deputy head) are full-time members of staff with other duties. Together with the headteacher, these people form the school's ICT Strategy Group. Beyond this management level, there is also core group of ICT champions, a group of some six to ten staff members who are committed, confident, enthusiastic innovators of technology use across the curriculum as a support for teaching and learning. An overarching thrust of the leadership model is that technology adoption is about tools supporting people to do their job more effectively and appropriately.

> *"You've got to be careful not to lose the human touch. I think good relations between people are hugely important. And although ICT is essential to education, you've got to remember that actually you're here for people."* (Headteacher)

In turn, having a focus on people rather than technology enables the SMT to make appropriate choices in terms of the technology it employs or trials:

> *"We sift and sort. We don't do everything. We were often offered the opportunity to participate in a software pilot project, or a project in this, that and the other. Every month something will come across our desks. But you need to be selective because actually you need to remember that your core business is teaching children and that, if you're not careful, you could take your eye off the ball and things can fall apart*." (Headteacher)

The employment of dedicated experts was seen to be the most cost-effective solution. Advice, support and training, and pedagogical support for e-learning would be kept in-house, and be timely and relevant to staff needs.

> *"I had a vision but no technical expertise. So you get in people who share your vision, who will bring the expertise and be your adviser. So for me it's about that...To have somebody in your classroom actually working with you and knowing that they can come back next week or in three weeks is what matters."* (Headteacher)

External CPD was perceived to be expensive, time-consuming and potentially disruptive of teacher's teaching time/responsibilities.

> *"I felt, when I first got a headship that teachers are here to teach and be in the classroom. However, in the same way that you ensure that teachers are in the classroom teaching, you need the expertise to support those teachers. Often the subject leader for ICT is also the vision for ICT. For me, that was not a good way of looking after people. So I got the experts in, so when a member of staff comes to you and says, 'I can't do that because…' then you can say, 'No, actually you can, go and see…'."* (Headteacher)

The school has chosen to adopt an independent, outward facing, collaborative approach to technology use. Although this has to a certain extent placed the school in a position of isolation from the Local Authority, from the perspective of the SMT it also placed them in a more positive position in terms of their collaboration with others and the provision of services to other organisations such as local primary schools.

> *"We work a lot with the Specialist Schools Trust and Becta but we do very little with our local authority. We can't afford to wait for them. We tried very hard to develop a relationship with them. It's a huge authority. But we're an outpost here, and we do our own thing."* (Headteacher)

A key role to date has been developing and sharing knowledge and curriculum resources and the learning platform has played a big part in facilitating this journey.

> *"We get tremendous enjoyment from the partners that we've worked with. External projects invigorate what's happening in school. We do an awful lot with*

> *partner primary schools. We found a big benefit from external projects is that it gives people kudos; it gives the whole area kudos, and kids like to be involved with it."* (ICT Consultant)

The school has been using the current commercially developed learning platform for over seven years. It has been a partner school with the learning platform developer through the e-learning manager and regularly feeds into the development of the product regarding issues including network ability, security and navigation. Prior to adoption of the current platform, at least four other commercial solutions were also considered.

> *"We've been working with our extranet to stream curriculum, principally curriculum, for about seven years now. The interface with the Management Information System happens, but it does not happen through the extranet."* (ICT Consultant)

The extranet has been used to stream curriculum resources since that time, initially as a resource repository, although there were (and are) also aspirations for it to be used for communication between teachers and learners and for tracking progress through tracking learners' activities on the VLE. This monitoring aspect was possible to achieve via the purchase of another commercially available learning platform, which could enable database creation and management, but that product was deemed to be too expensive and insufficiently robust at the time.

The early development of the VLE/extranet therefore took the path of a web-style repository for resource sharing both within the school and out to the wider community, whilst management of data (reporting, registration etc.) was dealt with through the use of a commercially produced MIS. The school also developed its own reporting system using databases eight years ago but this was later replaced by the MIS.

After around ten years of implementing technologies the school has reached a turning point, achieving its original goals of streaming the curriculum for access at home and school and facilitating tracking and monitoring of data; it is now going through a new phase, which focuses on parental engagement. The interface for the school MIS is accessible through a secure portal on the school's Learning Gateway via a link on the school home page. The MIS is used for e-registration, online reporting and parental engagement.

The VLE, extranet and website

The curriculum, communication, information and collaboration side of the school's learning platform is generated in and through the internal VLE, an interoperable extranet and the school website. These three elements are so well integrated it is sometimes difficult to see where one ends and another begins. The VLE is internal facing and represents a web-based shared network for staff and learners. The

extranet is an external-facing mirror of the VLE which replicates its environment and allows learners to access curriculum materials from home whilst maintaining security over internal school systems. The extranet also hosts collaborative portals for partnership activities. The website provides general information about the school.

There are separate portals on the extranet for staff, learners, parents and governors. The last two areas are currently underused. Staff are able to access information about CPD and training and there is a staff discussion board but this too is underused at present. Emails may be sent via the extranet but messaging is disabled for learners, except in some well-monitored areas. The most obvious use of the extranet and the VLE is for curriculum streaming. Some department areas have more resources online than others and some, more established, have a more web-page style feel to them. This gradual approach to populating the learning platform is acknowledged and accepted by the SMT as part of the change management process.

> *"I think we realised that that really high level use of ICT never could happen uniformly across every single department at every single hour of the day. You find certain departments that are doing really innovative stuff. We've had the science department video their own experiments, so children can see an experiment they've actually been part of. They can see it now either by going onto YouTube or logging onto our extranet. So you've the ability to rehearse stuff by getting children involved in that creative procedure as well. Same with podcasts: we started with RE and MFL. You don't necessarily find a month later every other department's doing it, because it may not be appropriate. One of the things that we found is that fires burn bright in certain areas, and that's what you want to do and then… share the results."* (ICT Consultant)

All users have a personal area where they can store and access files in and beyond school. These areas also have Web 2.0 type tools such as wikis and blogs but these are not much used as yet. These newer communicative tools were not readily available when the adopted learning platform was first implemented and the school is currently looking at ways of negotiating these new ways of communicating and the potential issues and implications arising from them before adopting these technologies wholesale. There are particular concerns about the possibility of cyber-bullying, inappropriate use of email and monitoring of message boards.

Monitoring, assessment and data tracking

The school began by developing their own assessment database in-house some eight years ago, and only switched to a commercial solution as their chosen MIS when more complex data analysis was desired. The current MIS is used for e-registration, reports (three per year), attendance and behaviour monitoring, assessment and tracking learner progress. The data manager takes responsibility for whole-school and departmental analysis of data. Data analysis reports are currently

printed out and circulated in paper format. Subject leaders plan interventions based on these. This approach mirrors the headteacher's vision of reducing teacher workload and freeing them up to teach, whilst leaving the door open for those who want or need specific support.

> *"We want teachers to actually be doing some teaching, and actually generating learning opportunities in the classroom, and there are things that I could show them that I think would steer them away from actually doing that really. They rely on what I do in my analysis, so that's probably enough really."* (Data Manager)

Data access is regulated according to user needs and teachers can access data at home and at school. This access takes place outside the extranet/VLE system and is also used to offer parental access via the secure Learning Gateway.

Curriculum and teaching

Areas of the learning platform used to support teaching and curriculum are the VLE and the extranet. Whilst use of ICT in the school is well embedded, use of the learning platform to support curriculum and teaching is varied. It is used by many but, as yet, not all teachers.

> *"With a VLE learning platform initiative – you're fundamentally trying to shift the way that people work."* (ICT Consultant)

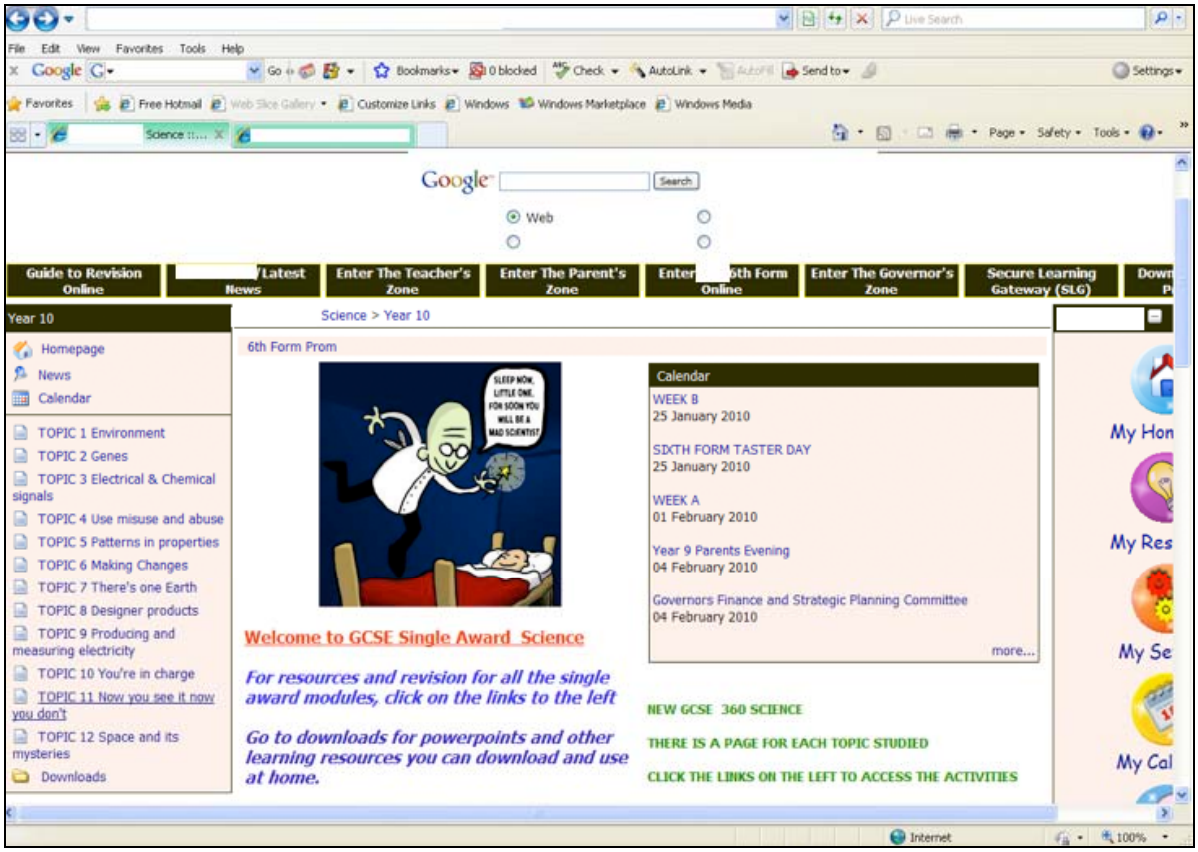
> *"The vision is to get much more… to really push those few teachers who still haven't got enough on the VLE."* (Headteacher)

Getting all staff on board with use of the learning platform is a future vision of the leadership team. Key areas of success are science and humanities (history and geography) and curriculum support for learners with SEN. These areas were mentioned as making good use of the learning platform by both staff and learners.

Where staff are using the extranet successfully, they are confident users and enjoy the wide range and variety of resources they have access to and are able to make available to learners. They see the importance of providing scaffolding for learners through the activities they post on the extranet:

> *"Well, I mean, it's important, the sort of literacy aspect, isn't it, sort of computer literacy. We don't want them going on Google and searching. We want it to be scaffolded for them so that they are looking at valuable, useful material."* (History teacher)

In a lesson observed during the visit to the school, the geography teacher was managing multiple websites, audiovisual resources and GIS simulators, and use of an IWB alongside a dry wipe board and worksheets.



Science department home page (viewed from the learner log-in)

An online GIS simulator was demonstrated to learners, whilst five other tabs were open on the internet browser (VLE, extranet, YouTube, Ordnance Survey website and Wind Location Site for the GCSE exam). Meanwhile, four windows were open on the Windows desktop (the browser, two PowerPoint resources downloaded from the extranet, and the Exam Guide). Preparation of these materials and multi-tasking in and around their use requires new ways of thinking about classroom practice as well as learner–teacher and teacher–technology interactions.

> *"You could just go to Google but that doesn't work. You have to have the structure around it to direct them."* (Geography teacher)

At the same time, the teacher likes this way of working as it is not only timely (preparation for an exam) but can be made relevant to her particular learners, and provides continuity between classroom and home and a coherent set of teaching and learning resources for learners' use. She also sees this method of working as a good way of providing independent learning pathways for learners, in and beyond the classroom.

> *"I think you just need to put your individual stamp on the lesson. I mean, I will obviously share resources with my other geographers and things and vice versa occasionally. I will always change things because it wouldn't be the way I would have said it. So I am only adapting what I would have stood up and said to just maybe be a bit of a visual aid or something or other because everybody teaches differently."* (Geography teacher)

Staff members are encouraged to create their own resources.

> *"Teachers become authors of the content like maybe they used to be in the 70s and that content goes online and their classroom goes online and then our kids can access the material at home. They [learners] can review, not just games, but coherent sequences of activities and lessons."* (Sociology teacher)

Support and training for resource generation is provided via the learning platform in the form of downloadable toolkits, web links to online support areas and tutorials and contact details for the e-learning manager. Most staff-generated resources are not web-formatted materials; they are generated using tools teachers are already familiar with, such as word processors, presentation software, collections of hyperlinks, and interactive whiteboard notebooks. Confident ICT users amongst staff find it easy to integrate these with the extranet. They are not fazed by content creation, acknowledging that initially it is hard work but that over time, workload is eased and it becomes not only manageable but also useful in terms of adaptability and flexibility of resources. Using tools they are familiar with means that learners can also easily download and share curriculum content. It also encourages staff to collaborate, seek peer review and feedback and share resources online.

> *"I've got a huge amount of resources and I still tend to look at it and change it probably each time I use it slightly. But the basis is there and I've got a huge bank of stuff."* (Geography teacher)

> *"I've got about a thousand resources now I'm in my eighth year of teaching. I look under TES, my teachers' website quite a lot and I will adapt all the resources and now I'm giving something back. I'm sharing my resources, especially for the new GCSEs because I think I've got to grips with it quite well in terms of what the language is they're expecting to teach the students and the kind of tasks they want us to do and just sharing them with other people because I know that there are a lot teachers that are actually struggling to get to grips with it. And I'm sharing it whilst saying, 'Right, tell me what you think about it'. Maybe I can adapt it again and somebody will produce something and I can look at what they have done and include it in my work."* (French teacher)

However, there is still some way to getting all staff on board with using the extranet as a curriculum resource. At present, the staff area of the extranet is underused as a collaborative forum. A teachers' Share Forum was created by the e-learning

manager with areas on teaching ideas, behaviour management, raising standards, and whole-school issues, but there are no posts in any of these areas as yet.

All teachers have their own space on the learning platform but not many use this. Teachers also have access to documents such as lesson observation sheets and lesson plan pro formas (word-processed documents) and links to resources for gifted and talented learners (with activities for primary and secondary learners and young people generally) alongside a spreadsheet with names of gifted and talented learners in the school. Also, in the Teacher's folder in the subject areas, there is advice and guidance on assessment and report writing, with recommended links and downloadable resources. There are also links to software applications such as Hot Potatoes for creating online materials.

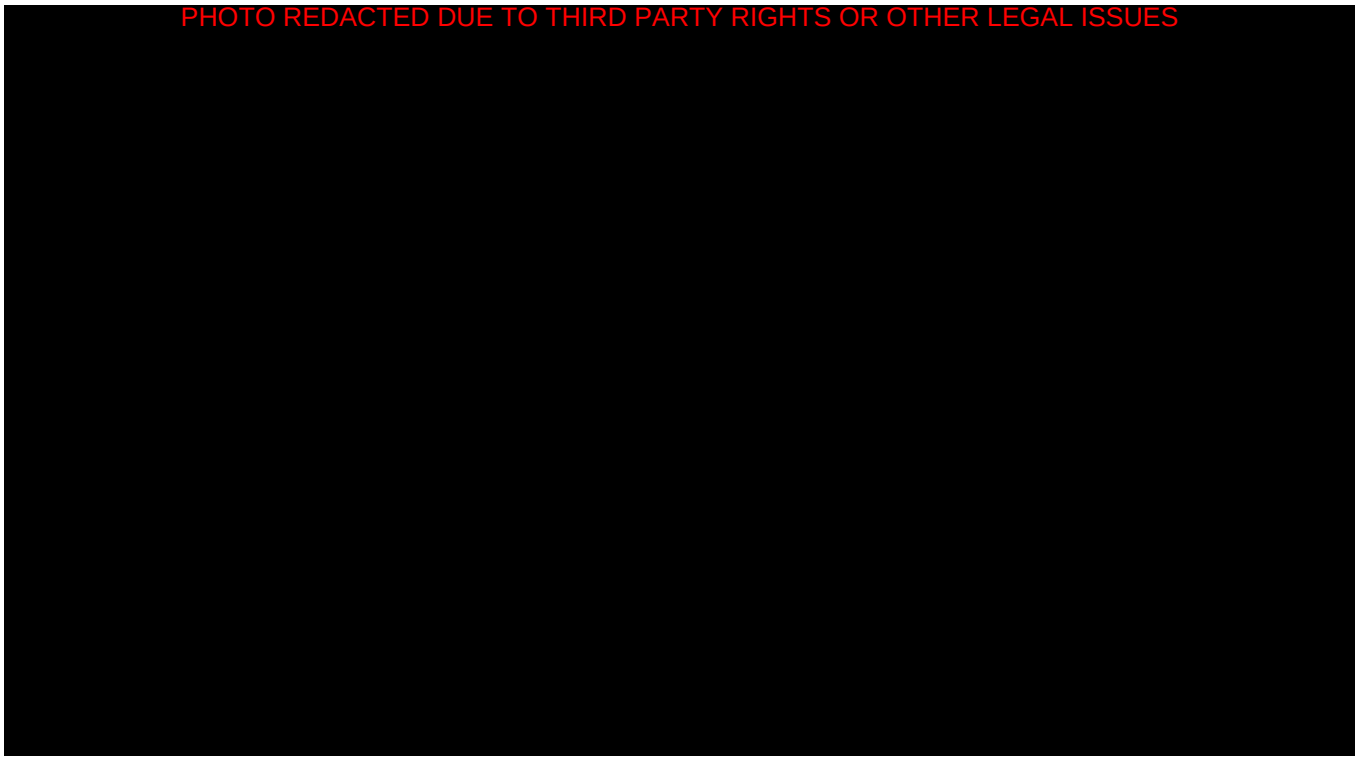
In addition to curriculum and teaching, the extranet has a well-developed Curriculum Support area which provides resources for learners and parents in relation to Additional Educational Needs/SEN, Diversity and Citizenship Education, Skills4Us, etc.

The Curriculum Support area has more of a web-page feel to it than the 'folderised' feel of earlier resource bank/repository style sections in other subject-led areas of the extranet. The SEN Coordinator very much regards the SEN section of the site as a direct link between home and school. There are closed areas for different groups of learners and these are viewed as a kind of virtual classroom space where communities can continue their learning collaboratively and safely in and beyond school. One recent successful use of the SEN section was use of a discussion forum to enhance learner confidence:

> *"We have a forum which is just for girls within the group that come to a Fun Club on a Tuesday. We've got lots of comments about Eastenders. They can also access the forum from home, but as long as they're writing and they're coming in and they're chatting, whether it's writing or talking, it's just about raising the confidence of them really. And it opened up a whole discussion around, you know, who could see the site, what we shouldn't be putting on it, so it just opened up a whole new area for them really. The soaps are what our girls watch and it does open lots of discussion for things that are going on and how they feel about it, how they'd feel in their situation. They're often quite vulnerable students."* (SEN Coordinator)

The Curriculum Support centre also used the extranet to facilitate transition between primary and secondary, with information about Summer Schools and showcasing activities and work produced in them. In addition, special areas are provided for Year 7 learners and their parents both online and in school to support and ease the transition process. The extranet areas are intended to support continuity of support between home and school by celebrating learner achievements (in and out of

school) and showcasing learner projects to parents, such as a Fashion Show designed to celebrate diversity and promoted by Year 9 learners.



Curriculum support – celebrating diversity via the extranet

The school library also has its own space on the learning platform with information on opening times, a map of the library, information on membership and services provided, and a tool for communicating with Librarians. In general, the learning platform (VLE/extranet/website) is used when it is deemed appropriate. In practice, teaching staff mix and match their technologies considerably, and are just as likely to make use of interactive whiteboards, projectors, presentation software, word processors, online games, simulators and video/audio clips, or any other tool that is deemed suitable to the task. On the whole, however, learning platform technologies are used more for curriculum delivery and as a support for teaching and learning both in the classroom and between home and school than for tracking and monitoring learners' progress.

Learning and learners

Learners in the focus group were all familiar with the extranet and its component parts. Year 7 learners tended to be less aware of all facilities than the older, Year 10 learners. This was explained by the fact that the learning platform is not widely introduced to learners until Year 8 as learners in Year 7 pursue the Opening Minds curriculum.

There is a subject area on the extranet for the Opening Minds curriculum but this is largely devoted to providing relevant web links for learners, rather than focusing on

individual subject areas. Learners have their own personal spaces for organising and accessing their work between home and school and this is accessible via the extranet.

The ability to transfer files between home and school was viewed as a valuable and helpful resource by learners:

> *"They've got a school extranet which you can access from home as well. So if you were doing homework at home and say you don't have a memory stick or something like that you just save it to the extranet and once you come into school you can go back onto the extranet and open it and you can print off your work or whatever. I've done that quite a few times with my English coursework and things like that."* (Year 10 learner)

> *"We have kind of like subject folders where you can have like revision sets and they give you revision sets and kind of like worksheets to do to like help you revise subjects for your tests and stuff like that."* (Year 10 learner)

However, home access to folders appears to be a recent facility being piloted this year and is not yet available to some year groups.

> *"We haven't got one of those yet."* (Year 7 learner)

> *"We were the first year to have it so we are sort of like guinea pigs they called us and we were just trying it all out for them, so... I think the year 9 have got it as well, I'm not sure."* (Year 10 learner)

Learners also confirmed that their teachers provided resources in the form of web-based materials and web links, in particular, for revision and continuity of lessons at home.

> *"Our geography teacher, because we're in the same geography, she uploads sheets on the extranet in the geography section so, you know."* (Year 10 learner)

> *"There are normally links on the extranet that she links up to it and she'll say... she'll talk us through how to get onto it and then like we'll like go into a computer room and do it ourselves. There are loads of links, sort of different activities and different subjects on the extranet."* (Year 7 learner)

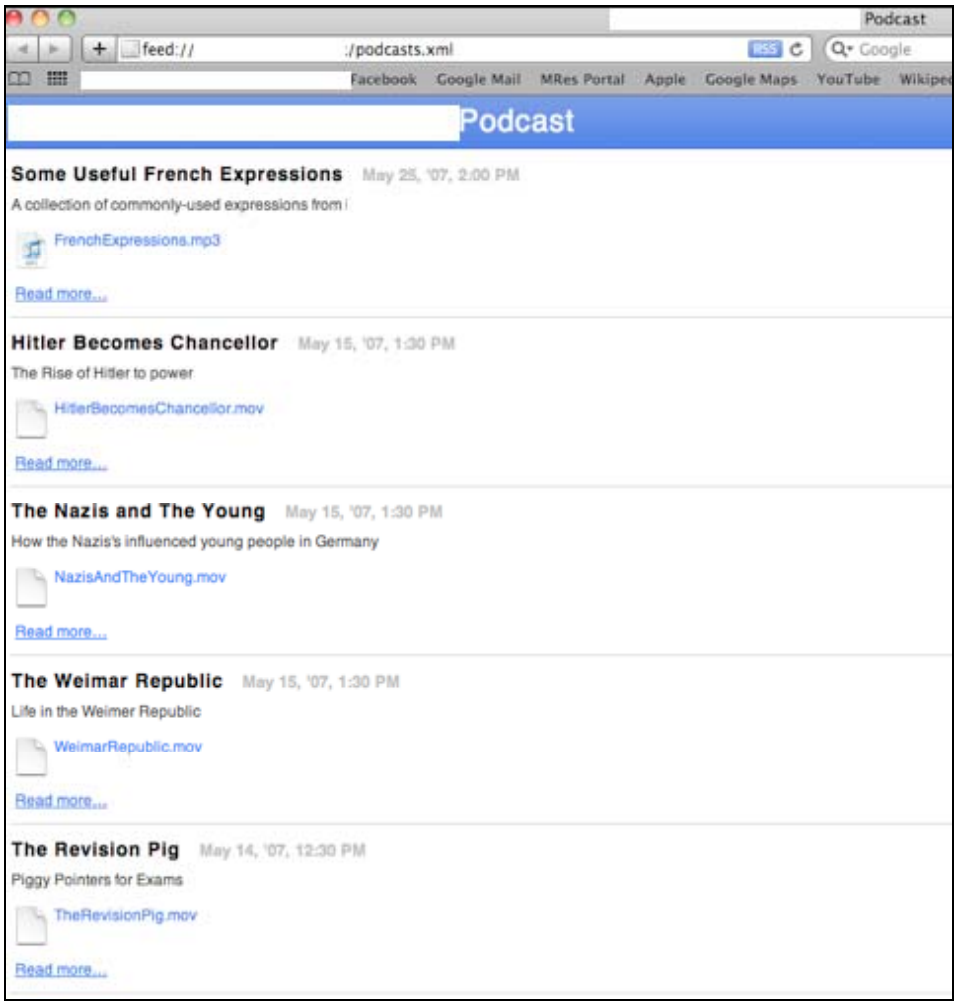
Other things learners indicated the extranet was used for were exam revision, homework, absence from school, whether individual absence through illness, or whole school absence due to extreme weather, or group absence through trips or other activities.

"On the snow day we did use it because they used to put up whether the school was closed on it and so lots of people went on there to see." (Year 10 learner)

"They put up like newsletters and activity sheets sometimes, like at the end of term that sort of thing, but I think mainly people use it for homework mainly." (Year 10 learner)

"There are lots of revision sheets. If you look down the side there's like year 11 revision there, down the side, or things like that. It's got all different units and then the same for Year 10 as well." (Year 10 learner)

There are also revision forums that learners are encouraged to use to ask teachers for help and advice, but there are no posts in these as yet.



Teacher-generated revision podcasts on the extranet

Learners indicated that they downloaded materials for homework from the extranet but either printed it out and handed it in or saved it to their own work areas rather than sending it by email or uploading it to a teacher area.

Other tools available to learners in their own area relate to an e-portfolio style suite. Learners have the opportunity to create a web page, save and manage resources, customise their settings, receive a personalised calendar, contribute to blogs, forums and wikis, generate a 'to do' list and keep an online diary. These facilities are not, however, in widespread use as yet. A trial has just started with sixth-formers. This is in keeping with the leadership's vision of a stepped approach to development of the learning platform for teaching, learning and assessment. This also reflects the cautious, considered and evaluative approach of the headteacher and the ICT Strategy team – that new initiatives are trialled on a small platform – and any wrinkles ironed out before proceeding to a whole-school rollout.

Learners indicated that they sometimes would collaborate or give peer feedback via the learning platform, mainly through shared network folders but that this didn't happen frequently. They also indicated that most teacher feedback was given back orally or in written form rather than electronically and that work was printed out and handed in for this. They sometimes used online testing and quizzes that gave immediate feedback and liked this. They made reference to SuccessMaker (an offline test tool for maths) and indicated that they found this kind of learning fun, motivating and independent.

> *"It's more fun and it's better because like you get to do it in your own time and you can do it but the only thing is you do get timed out on it but you can pause it to like work it out on a piece of paper but you can work it out in your own time and stuff like that. You don't have to wait for other people and stuff like that. You can just do it as you want."* (Year 7 learner)

Learners also used the learning platform for literacy activities and independent learning.

> *"We go into the library and we have to read a book with a special like colour on it and then we go onto a website and we do a test on the book to see how well we understood the book and then if we get like 100 per cent on the book we get like… we get our name put on the wall of fame in the library."* (Year 7 learner)

There is a small continuing problem for learners who don't have home access to computers, although that is gradually changing. A Year 10 learner who now has a computer at home spoke of what it was like not to have one:

> *"In Year 7, I didn't even have a computer so it was really difficult for me because everyone was like, oh yes, I'm on Facebook. I was like, what's that? And then everyone would be like, oh I've got MSN, and I used to think like,*

> *what is that? And then like the teachers would be like, save this, do this at home, and I was like, but I can't do it at home, because I didn't have a computer. So that was a real problem for me in Year 7 but having a computer at home and at school is so much easier to do homework and things. It's definitely really good…It also helps that you can also go to the library like after school and the computers are open for you to do homework if you can't access it at home, so you can do it from there."* (Year 10 learner)

Learners noticed different practices in classrooms:

> *"We do lots of different ways of learning, like some teachers will just use the normal whiteboard whereas some maybe, not to be rude, but maybe some more younger, modern teachers would probably use the technology. Whereas the teachers that have been teaching for a long time are used to teaching without. They prefer working out of books and things like that."* (Year 10 learner)

When asked, learners suggested that the ratio was perhaps 70/30 with 70 per cent of teachers making frequent use of technologies in the classroom to support teaching and learning. Those who were power users were described as: geography, ICT, business, science, maths and French.

Learners indicated that they preferred using technologies to just using books to support their learning.

> *"I find working out of books really boring."* (Year 10 learner)

> *"When like we have the games it's more exciting and fun to do."* (Year 10 learner)

> *"The majority of people, when we did a class survey, were kinaesthetic learners that like to do things. I mean when you're doing the same thing over and over again, your brain just doesn't want to do it."* (Year 10 learner)

> *"It [technology] keeps you more concentrated."* (Year 10 learner)

Others were more cautious and suggested a mix of on and offline learning was best.

> *"Sometimes it's best with both. In science we mostly use textbooks but sometimes you go on the computer and see sometimes you get more out of a book than what you do online. Whereas sometimes things are… you aren't able to get things online which is in books."* (Year 7 learner)

> *"Yes, I agree because some teachers won't use it as much as others, like the school extranet. So one subject, like geography, you'll get loads of information where you can click on it but whereas a subject like dance or drama will hardly*

> *have anything on the extranet so it will mostly be textbooks that will be useful for you. It is up to the teachers to put it on there really."* (Year 10 learner)

Learners felt technology was sometimes nice for a change of pace or to illustrate things that textbooks couldn't do, or to help them memorise difficult things.

> *"In science it is nice when she does things on the computer and we get a chance because most of the time it's textbooks. Our teacher, she used YouTube most of the time and we've just done one and it created a song about the electromagnetic spectrum and it's a really catchy song and it's the only way I could remember it. You can sort of figure out where the colours are so it is easier to memorise."* (Year 10 learner)

The Student Council also has a space on the extranet with information on aims, roles, calendar and activities etc.

Parents and families

There is a Parent Zone on the extranet, which contains general information for parents, including information on school policies, learner revision techniques, etc. The general perspective of both learners and staff is that parents are not highly motivated by electronic communications.

There is generally low parental engagement with the school, and this is an area the school would like to strengthen in future. There is, however, some good parent–school engagement via the Curriculum Support centre both in terms of information provided online, special projects, transition from primary and related summer school activities and opportunities for drop-in sessions at the school.

> *"In the Skills4Us group parents are invited in initially. We have a very open door policy. They can email via the extranet, via the Skills4Us site, there is a link to email me directly."* (SEN Coordinator)

> *"We've used it [the extranet] in the summer school… hopefully learners are going home to show their parents, 'Look this is what we did, this is where I can get on…' and then we add the photos to it, and they are changed nightly so that they look every night about using it, about knowing where the school website is. By the Friday most parents have looked at it if they have access to the computer... It's a huge issue for parents when their children transfer from primary to secondary. The parents almost need as much support as the students." (*SEN Coordinator)

Learners also report that they have shown the extranet to their parents:

> *"My mum always mentions go on the extranet and see if the school's open and she doesn't realise that the extranet's not where you can find it."* (Year 10 learner)

> *"On the website there's a little thing that says, contact us, where your parents can message the school or they can come in, ring in, anything like that."* (Year 10 learner)

General communications to parents are currently made by telephone, text messaging (for absences and late arrivals), termly reports (printed) and via student planners. Newsletters, the school calendar and a curriculum map are available online in the Parent Zone. Newsletters are also available in paper format.

Reports are currently delivered to parents in paper format three times a year. They are produced electronically using SIMS. The school is, however, a Becta advocate school and is currently involved in the DCSF Parental Engagement rollout. The school has an ongoing contribution to the development of the e-maturity model (Becta) on the aspect of online reporting, as part of the Every Child Matters agenda. The school has been working on developing this aspect on parental engagement with the learning platform for the last two years and is currently at the stage of deciding what data should be available to parents.

> *"We had a meeting – myself, the other Deputy Head and the ICT Consultant, and he gave a presentation on how online reporting, you know, how the sheet will look when parents log on, and the debate is what we will put on there; what they really do need to know on a day-to-day basis."* (Data Manager)

A pilot group of parents is currently engaged in evaluating an extension to the MIS for parental reporting but this is not yet in general use. The Senior Management Team have adopted a stepped approach because they want to ensure that everything is working properly before rolling it out to all parents and that appropriate policies are developed which deal with how data is shared, and who has access.

> *"As we roll this out, what, it makes you aware of some very important things. In any database, especially a Management Information System database, you're going to have anomalies. Parents that no longer are in the area, parents that have no more legal access to a child, because they've been barred from having access. They could be additional parents coming into a child's life. You get lots of changes of details such as email addresses, telephone numbers etc. So, to have discrepancies in any database is normal. But, of course, when you're giving a public face to it, when you're letting it go out there, then it's obviously very important that it's right, because if Mr X, for example, logs on and sees his name spelt incorrectly, that's not the way to go. More importantly, if he logs on to see his child's details, if that data's not accurate, then it's worse than not having the data there in the first place."* (ICT Consultant)

3. Benefits of using the learning platform

Findings from the case study themes are described below.

Enhancing and extending the curriculum

Leadership, staff and learners all viewed the learning platform as ways of enhancing and extending the curriculum. Leadership focus was on a central portal for streaming curriculum both in school and between home and school and as a gateway for partnership collaboration (with partner primaries and SCITT teacher training establishments). The availability of resources was regarded by all stakeholders as a particular strength of the school. An interesting aspect of this particular school was the decision to make all curriculum materials available via the school extranet available to any user on an open access basis.

A key benefit perceived by staff and learners was the use of the extranet to stream resources for GCSE revision. The digital environment enabled teachers to provide and learners to access materials from lessons, exam boards, related websites, as well as interactive and audiovisual materials such as video clips, podcasts and quizzes both in school and at home.

> *"For almost every GCSE module there is revision stuff or stuff they might have done in class."* (Science teacher)

> *"You've got loads and loads of role play practice and past papers. There're sound files I have started to include too, to make them improve their pronunciation."* (French teacher)

> *"You can have like revision sets and worksheets to help you revise for your tests and stuff like that."* (Year 10 learner)

> *"The extranet is mainly used for people doing GCSEs like, so that's easier. It's a bit more important than normal schoolwork."* (Year 10 learner)

Enhancing teaching and learning resources

Staff and learners were very positive about the range and variety of teaching and learning resources a digital curriculum provides. Examples were: use of YouTube video clips to support learning in subjects like maths (Pi and Pythagoras), English (Lady of Shallot) and science (the electromagnetic spectrum, living in Space), and the use of online simulators, such as GIS to support learning in geography. Teachers interviewed (not only ICT champions) indicated that they enjoyed generating their own resources whether they made these themselves or collated them from the Web.

The French teacher, for example, made her resource relevant to local contexts and learner age ranges by making the local area the target town, and the role play based around a teenage girl. Learners like variety and the use of resources that targeted their different learning styles, allowing them to experience learning in different ways.

> *"I like the idea that maybe the technology is encouraging us to be more creative." (*Sociology teacher)

> *"Our teacher, she uses YouTube most of the time and we've just done one and it created a song about the electromagnetic spectrum and it's a really catchy song and it's the only way I could remember it."* (Year 10 learner)

> *"It [technology] is nice for a change. It's like in science it is nice when she does things on the computer and we get a chance because most of the time it's textbooks."* (Year 10 learner)

Reinvigorating the curriculum

Some teachers and departments have become more innovative, populating the learning platform (VLE and extranet) with their own and learner-generated resources, which include traditional resources such as worksheets, notes and slideshows alongside newer resources such as audio files (revision podcasts, language pronunciation and role plays, video clips, and interactive quizzes and games).

> *"You're getting children involved in that creative procedure. We've had girls doing sound recording, girls doing videoing, girls doing the actual commentary, girls doing the experiment itself. You involve them in a process like that, in an audiovisual process like that and it boosts their interest."* (ICT Consultant)

Enhanced management of learning resources

The learning platform (both components – content and data management) was seen as beneficial for facilitating collaboration within school and with external partners (local, national and international). It was viewed as a 'one-stop shop' which was easy to organise, manage and through which users could easily retrieve resources and information.

Teachers indicated that they enjoyed being able to create and use their own resources and that the extranet provided a good vehicle for disseminating them. They also indicated that employing a digital curriculum meant that they were able to easily adapt, reuse and differentiate their resources year on year. The majority of teaching staff did not try to generate web-based resources but rather, used the extranet as a repository for a wide range and variety of resources created using familiar tools.

Opportunities for personalised learning
The learning platform was widely viewed as a way of allowing learners to work at their own pace both in the classroom and at home, using a wide range and variety of resources, familiar and new. Different kinds of technology were used to meet learners' different needs and learning styles. It was also viewed as a vehicle that allowed staff and learners to learn in new and different ways.

> *"[Learners have] moved from being typists to using IT as an intellectual and creative tool."* (Headteacher)

> *"It lets students work individually at their own pace, do their own thing.* (Science teacher)

> *"It allows students to review lessons at their own pace; to test their progress using quizzes, tests. It allows them to communicate with me outside the classroom. It allows them to discuss with each other."* (Sociology teacher)

> *"There are normally links on the extranet and the teacher will talk us through how to get onto it and then like we'll go into a computer room and do it ourselves. There are loads of links, sort of different activities and different subjects on the extranet."* (Year 10 learner)

Lifelong learning
The availability of a wide range and variety of learning resources online and learner skills developed in accessing, using, organising and manipulating these resources was viewed by the headteacher as a way of preparing learners for the future world of work.

Making the best use of teachers' time
The leadership vision was that certain aspects would be dealt with by expert teams to enable teachers to focus on teaching and learning. For this reason the Data Manager takes care of the bulk of data analysis for learner reporting and disseminates this to subject leaders who devolve down to staff within departments. An in-house trainer was employed specifically to meet staff technology needs in a timely and regular fashion and an E-learning Manager role introduced (with devolved time to the occupier of the role who was also a teacher) to support links between technology and pedagogy.

Teachers themselves suggested that whilst initial generation of resources and interactions with the learning environment required time and added to workload, over time, this was much reduced and the benefits made it worth the effort insofar as using digital resources and the extranet enabled them to have all their lessons in one

place, simultaneously available to learners, accessible at home and in school. Further, it was easy to adapt and change resources as required.

Enhancing learning between home and school

This was viewed as a key benefit by leadership, staff and learners. Continuity related to things like completion of lessons where work was unfinished, completion of related homework, access to additional relevant resources to extend learning at home, catching up with lesson missed through absence (whether of teacher, of learner, through school closure, or learner trips or other activities where they are off timetable).

> *"[The extranet] allows us to stream curriculum resources to children at home, in school, very, very easily."* (ICT Consultant)

> *"Learners can access a lesson again at home, if they haven't quite got it or they want to reinforce it*." (Science teacher)

> *"We had the extreme weather bit where they can access lessons if they can't get in*." (Geography teacher)

> *'If I get run over by a bus, they can just log on… lesson one!"* (Sociology teacher)

> *'If you were doing homework at home and say you don't have a memory stick or something like that you just save it to the extranet."* (Year 10 learner)

> *"The most useful thing for me is being able to import my homework from home and school."* (Year 10 learner)

Digital literacies

The development of the learning platform by teachers for their own learners was seen as a positive contribution to developing learner literacy by leadership, staff and learners. The provision of teacher-generated resources and teacher-selected web links was seen to be a way of providing manageable, relevant content.

> *"We don't want girls or children just sitting there and getting a Wikipedia view of the world or a Google view of the world… it's the old thing about 'data rich, information poor'. We're wanting them to turn more to our extranet, to materials that have been authored by professional teachers."* (ICT Consultant)

> *"You know, that the first port of call, rather than targeting Google, might be to go onto the extranet. They [Year 7 learners] said that they preferred the extranet because they could find things. They said when they go on Google,*

they couldn't. You have to have the structure around it [online information] to direct them." (French teacher)

"Probably the most useful thing is the Learning World [VLE] and the extranet where there are things like the links to other websites that help you learn." (Year 7 learner)

Enhanced communication and school promotion

The learning platform (VLE, extranet and website) was seen as a useful portal for showcasing school activity, particularly areas in which the school was strong. The leadership team saw these opportunities for promotion as providing recognition, positivity, confidence and self-esteem for both staff and learners. This was deemed especially important in the context of a non-selective school in an area which operated a selective system.

"We've had children – sixth-form children – that a couple of years ago won a national competition called Think Quest. The sixth-formers themselves worked on this, they cascaded some of what they knew down to younger pupils as a result, and we won the national under-19 award for that. And it was a superb, superb event, and we find that really bringing in these big external IT projects, it's getting people to sign up to them, it gives them such a boost." (ICT Consultant)

"I think for a school like this to have a sort of national platform, has been very good for our confidence and our kudos." (Headteacher)

Inclusive education

The extranet was perceived to be a useful environment for providing special 'individualised' spaces for learners, especially those new to the school (transition from primary to secondary) or with additional educational needs. It provides spaces where they could interact with each other and with staff safely and confidently.

"The discussion forum does open lots of discussion opportunities for often quite vulnerable students." (SEN Coordinator)

Data capture and analysis

The electronic reporting system (Management Information System) is more streamlined and it has become easier to capture, organise, manipulate, analyse and disseminate data, for staff and parents. Data handling has become more effective, enabling improved monitoring and tracking of learner progress and attainment. Whilst these are potentials of the system, more remains to be done on future

integration of the data management systems with the content management systems. In part this is affected by waiting on external providers to adapt existing software and in part it is also affected by taking time to assess how to manage data that will be made publicly available and to develop adequate user policies.

Management of student behaviour and attendance
E-registration has become an embedded practice in the school, enabling more accurate monitoring of student behaviour and attendance.

Leadership and management of teaching
The learning platform is not currently used to manage leadership or teaching strategies on a whole-school basis. Whilst there is evidence of attempts to encourage staff, parents and governors to use the extranet as a collaborative, sharing and discussion area, these attempts have not, as yet, taken off and this may be an area for future development. At the same time, the ethos of the school is very much on human interaction and appropriate use of technologies such that this particular area is likely to benefit from further dialogue and discussion amongst the learning community.

> *"You've got to be careful not to lose the human touch. I think good relations between people are hugely important. And although IT is essential to education, you've got to remember that actually you're here for people."*
> (Headteacher)

4. Challenges and solutions

Key challenges for the school centred on effective management of change processes, including awareness of the underlying complexities of integrating technologies and pedagogy and planning for technological obsolescence; extending 'buy in' to all members of staff as well as to parents; and issues relating to e-safety and appropriate use of communication technologies.

Effective change management

The headteacher's vision was to bring together an expert group which included members who were specially employed (ICT Consultant and E-learning Support for in-house CPD) and members of existing teaching staff – the E-Learning Manager (History), Data Manager (Deputy Head and Science), ICT subject leader and ICT Technician – to oversee the ICT strategy of the school. Longevity of experience in technology innovation also contributed to an emergent understanding of the change management process. This led to a cautious, considered approach of stepped development, independent decision-making by the school, and an explicit strategy of 'lighting small fires' that could then be spread in a controlled fashion. The underlying ethos of the strategic vision of the ICT strategy team was: step the development, make judicious choices as to what elements to work on, keep projects, innovation and experimentation to a manageable level, see what works well and only then escalate to the wider school community. Patience, timeliness, relevance and fitness for purpose were key watchwords.

> *"It's taken a long time but we've achieved a lot of what we intended to achieve, which was a better reporting system, a better tracking system, and an opportunity for people to access the curriculum. But I think after a journey of eight years we've reached this point now, but I think this is just the beginning of the new phase. Because you've got to monitor how, you know, sort of communicating with people like parents electronically, so, sort of, engaging parent stuff."* (ICT Consultant)

Fitness for purpose

Technology innovation, whether this is learning platforms or other technologies is viewed as a tool, which supports teaching and learning. However, a key view of the leadership team was that 'knowing when *not* to use technology' was also important.

> *"At the same time that idea of knowing when it's appropriate to not use IT is probably one of the best lessons."* (ICT Consultant)

Appropriate pedagogic strategies were achieved through a process of ongoing evaluation, sharing of best practice and use of technology experts (ICT champions and E-Learning Team). Technology (including the learning platform) was seen to be only one of many key elements of school life. As such it was seen as central to the school development plan, but not dominant. Other aspects such as social

interactions, pedagogy and management were seen to be equally important, with each of these aspects feeding into the other.

Planning for technological obsolescence
Because of the long experience of the school in the introduction and implementation of the learning platform, the ICT strategy team acknowledged that independence of choice, ongoing self-evaluation of local needs and the need to expect and plan for long-term change/adaptation of technologies was a necessary skill. This required good relationships both with learning platform developers (in terms of communicating needs) and with staff and learners (in terms of updating content and upgrading of equipment and online environments).

> *"It's not an event, it's a process."* (ICT Consultant)

Staff and parental 'buy-in'
The key to managing staff was to understand that change takes time and some staff will come on board earlier than others. At the same time, it was also noted that it was necessary to recognise that there is a tipping point and at a certain level of e-maturity, progress can only be made when remaining staff are required to participate.

> *"I think we've still got shortcomings in [the learning platform] of course, and some people adapt more quickly, don't they, than others? Some people embrace it in a way but other people don't. There is a tipping point I think, and I think we've never, I've never believed that you force it on people. I think you provide them with the resources, you provide them with the training, and then you do one job at a time. I believe that you've got to take people with you, but then you are always then left with a residue of people at the end who won't do it and then you've got to demand it and you've got to make them accountable."* (Headteacher)

Parental engagement is a key issue for the school. Here, too, the policy has been to start small – communicating with parents in ways they desire and providing a dual system of paper/electronic materials. In terms of parental reporting and other projects, the school has chosen to work with small groups of interested parents to see what can be learned before escalating this up to all parents.

E-safety and effective and appropriate communication
The shift towards multiple forms of electronic communication (email, text messaging, discussion forums) and increased ease of use and access is a current concern of the school. They have taken the approach of disabling messaging services for learners and providing only monitored discussion forums in small experimental groups (SEN and the sixth form) in order to identify and establish a body of appropriate practices. Monitoring and evaluating use of email by staff and learners is in process and the aim is, now, to develop a coherent set of policies for appropriate use. In areas where

new communication technologies (discussion forums) are being used, this is generating helpful discussion and debate between staff and learners as to what constitutes appropriate use.

> *"I mean, it opened up the whole discussion around, you know, who could see this site, what we shouldn't be putting on it, so it just opened up a whole new area for them really."* (SEN Coordinator)

Access to technologies

There are still some issues relating to home access to technologies. The school has tried to help parents with this by reallocating older equipment but cannot help with Broadband costs. Provision is made before and after school for learners without home access to use school-based technologies and there is a rota for different year groups. The school also hope to make use of government schemes like the Home Access scheme to address this issue. In the interim, they operate a dual procedure, providing paper resources for those without access.

The changes in the ICT department

Recent changes in the ICT department of the school have held back some initiatives (the implementation of e-portfolios, for example) and training:

> *"We haven't had a Head of ICT here for a time, so the training has been... technically it's up there and ready and a lot of the older students use it a lot. The sixth form use it a lot. Stage 4 use it a lot but it's been hard to organise coherent training with the disarray in the ICT Department the last couple of terms.*" (Teacher)

Updating data and content

There were some comments about increased workload and responsibility for updating both content and data and for management of online resources. Staff who were confident felt that this was a matter of changing practices and that the challenge/burden eases out over time. Staff responsible for data management thought that increased monitoring and management of learner data which was to be made publicly available might necessitate a dedicated specialist responsible for monitoring, reviewing, and reporting on reporting and management of data.

5. Drivers

The key drivers for escalating use of the various components of the learning platform and related technologies in the school are first and foremost its impact and added value for learners and learning. Technical drivers are that the technology resources be fit for purpose, robust, flexible, adaptable and inter-operable and that it is understood that there is no ‘one size fits all’ category. The learning platform must be easy to use, compatible with existing systems (technical and pedagogical). Key individuals are the ICT Strategy team, in particular, the headteacher and ICT Consultant (strategy, vision and implementation), the E-learning Manager (pedagogical strategies), the E-learning Support Role (staff training and support), the IT Technician (technical and network support), the Data Manager (data analysis and data management training and support) and ICT champions (pedagogical strategies, peer support and sharing of best practice). Other drivers affecting the implementation and ongoing development of the learning platform as part of the wider technology strategy of the school were: policy matters (Every Child Matters, Online Reporting, Ofsted) and collaboration with external partners, including the local community, local schools and national agencies. Freedom of choice, independence of action and ongoing recognition for excellence in ICT use were also key motivators for the school.

6. Conditions for success

Key conditions for success were described as the explicit pursuit of a high level of e-maturity; clarity of fit between technology and pedagogy supported by a strong, explicit strategic vision and model for implementation; a cascading leadership model, where specific expertise was identified, provided for where it didn't already exist, and corralled and redistributed at appropriate levels (for example, headteacher/ICT Consultant to ICT Strategy Group; E-learning Manager to staff on pedagogy; E-learning Support to staff on training, Data Manager to staff on data management; and ICT Champions to staff as peers on pedagogy, support, training and motivation). Successful implementation of the learning platform and related technologies was linked to its integration with a holistic school development plan, where it was seen as core, but budgeted for and evaluated and framed in conjunction with related school priorities rather than as a standalone element.

> *"[ICT] is central, there's no separate plan, it's central to the school development plan. And it's central to the school's budget, because it's not just about the way we deal with the education of ICT, it's the support of that education."*
> (Headteacher)

An ongoing, consistent, but constantly evolving change management process which recognises that: change is a natural process of development; that change takes time; that staff have different needs and come on board at different levels of maturity (some can cope with experimental stages, others need to know that things 'work properly'); that staff need ongoing training, support and resources; that forms of communication and dialogue need careful consideration in the shift from private to public interface where communications are more transparent and may be misunderstood or inappropriate to the goals and aims of the institution as a centre for learning.

7. Lessons learnt and future plans

The first question that needs to be asked is not 'Why this technology?' but 'What are schools for?' – and only then to reflect on the kinds of added value that new technologies, whether these are learning platforms or something else, bring to teaching, learning and the lives of learners. The school has learned to be more critical about justification for, and implementation of, technologies, turning from promises of vendors and abstract agendas to real needs of the school.

> *"I think one of the things that's really important in this school is that we don't ever just go, we have an idea and just go for it. Because you've got to think it through, you've got to think of the implications. And you can find yourself spending huge amounts of money for very little impact. And the sort of staged approach that we've had has meant it's taken a while but we've saved on resources, and we've taken people with us. You've got to keep at the back of your mind its impact on learning."* (Headteacher)

Whilst the school is happy that they have adapted to the emergent lessons of their learning platform implementation over the last ten years, things they might do differently relate to getting staff on board earlier and in a more coherent fashion through a more explicit sharing of best practice.

> *"It took us a while to bring staff along, that was a really strong learning process; it was almost like a management learning process as well that, wasn't it? It wasn't just about ICT."* (ICT Consultant)

Another priority is anticipating the ongoing nature of change and building this into the design, use and future development of the learning platform, such as developing strategies to assimilate new developments (technologies such as blogs, wikis, forums, web-based presentation – opportunities for dialogue, interaction in online spaces) more easily.

Future and immediate plans include developing explicit strategies to get remaining staff on board with use of the learning platform; developing a web-based sixth-form university-style tutorial system to support vocational and work-based learning; developing learner use of e-portfolios (in progress with the sixth form); parental engagement and reporting (a pilot group is already evaluating this); sharing best practice with all staff and the wider community via ICT champions through workshops and/or web-based presentation of model exemplars; increased use of effective and appropriate dialogue and communication between staff and learners (for example, use of messaging, discussion forums and electronic submission of homework); facilitating web-based monitoring/tracking of progress by teachers (in the form of improved and more effective e-marking) and by learners for learners (through use of e-portfolios, for example).