E-learning for the secondary school: seeking the most appropriate solution

An exploration of how one south Wales secondary school might best approach the successful introduction of a Learning Platform.

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This dissertation is being submitted to the University of Wales in partial fulfilment of the requirements of candidature for the degree of M.A. Education

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Declaration

This work is being submitted in partial fulfilment of the requirements for the degree of M.A. Education and has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed: [Signature]
Date: 6 October 2011

Statement 1

This dissertation is the result of my own work and investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly indicated. Other sources are acknowledged by giving explicit references. A Reference Page is appended.

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Statement 2

I hereby give consent for my dissertation, if accepted, to be available for photocopying and for inter-library loan, for deposit in UWIC’s e-repository, and that the title and summary may be available to outside organisations.

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Abstract
This research project sought to understand the most appropriate way for one 11-16 co-educational community school in the south Wales valleys to enhance its recent developments in the use of Information and Communications Technology (ICT) as a tool for teaching and learning. More specifically it aimed to discover the most effective strategy for the introduction of a Learning Platform.

A range of literature produced over the last decade was reviewed, including books, journal articles, government reports and publications from specialist advisory bodies.

Collective case study methodology was employed. Four schools were involved in the study, namely the research school itself, two schools in England that had achieved awards for excellence in this field, and one other Welsh school that had recently been through the process of implementing a learning platform. The research instruments used were interviews, observations, questionnaires and the study of documentary evidence.

The research revealed that there was already much good practice in the use of ICT at the research school, with many features of a Learning Platform in place: a Management Information System, secure online storage for pupils, email communication for staff, a regularly updated and expanding website (including features of e-learning) and with a pupil tracking system about to be introduced. However, there was no overarching software to bring everything together in a streamlined fashion, and there was more emphasis on the use of ICT in teaching rather than learning.

Examination of the three other schools revealed a variety of Learning Platform solutions; one was designed and maintained by the school itself whilst the other two schools had bought commercial packages.

Finally, research at the Local Authority within which the school exists revealed that an exciting £40,000,000 14-16 initiative was soon to be launched that would include the implementation of a countywide Learning Platform.

I concluded that in light of the Local Authority initiative, the school should become actively involved in it, potentially as a pilot school. In the meantime, it could investigate the further development of its own many good features.
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Acronyms

AH  Assistant Headteacher
BECTA  British Educational Communications and Technology Agency
BERA  British Educational Research Association
DCELLS  Department for Children, Lifelong Learning and Leisure
DVD  Digital versatile Disc
ICT  Information and communications technology
KS  Key Stage
LA  Local Authority
LP  Learning Platform
MIS  Management Information System
NACCCE  National Advisory Committee on Creative and Cultural Education
OFSTED  Office for Standards in Education
PLC  Professional Learning Community
SLT  Senior Leadership Team
VLE  Virtual Learning Environment
WAG  Welsh Assembly Government
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Part One - The Research Proposal and Outline

Research Statement

This study sought to understand the optimum approach for a secondary school in south Wales to take to launch and establish a Learning Platform (LP). An evaluative case study of the school’s attitudes towards, and potential to develop, the use of Information and Communications Technology (ICT) and e-learning to support the curriculum was conducted, alongside case studies of three other schools in the United Kingdom (that already used LPs) in order to ascertain the tangible benefits to stakeholders, and to consider their methods of introducing this tool for learning into their culture.

The British Educational Communications and Technology Agency (BECTA) (2008b,p.1) explains that ‘A learning platform brings together hardware, software and supporting services to enable more effective ways of working within and outside the classroom.’ It also states that LPs can be varied, but that they should share the following ICT based facilities:

- **Content management** - enabling teaching staff to create, store and repurpose resources and coursework which can be accessed online
- **Curriculum mapping and planning** - providing tools and storage to support assessment for learning, personalisation, lesson planning etc.
- **Learner engagement and administration** - enabling access to pupil information, attendance, timetabling, e-portfolios and management information
- **Tools and services** - providing communication tools such as email, messaging, discussion forums and blogs.

This study aimed to discover the most suitable, practicable and realistically achievable way forward for the research school.
Rationale

At the time of this study, there were approximately 1000 students on roll at the research school, an 11-16 mixed community school in the south Wales valleys. About half of the pupils came from residential areas which were neither particularly prosperous nor economically disadvantaged, with the other half divided between prosperous and disadvantaged areas. Some of the pupils were housed within Communities First areas, this being a term for a Welsh Assembly Government programme ‘to improve the living conditions and prospects of people in the most disadvantaged communities across Wales’ (Welsh Assembly Government, no date).

At the time of the most recent school inspection, it was reported that ‘Just over 16% of pupils are entitled to free school meals. This is similar to the figure in the last inspection report and close to the national average.’ (Estyn, 2010 p.1). There were very few pupils from ethnic minority backgrounds and most pupils spoke English as their first language, although it was noted that the school served a traveller community. There was the full time equivalent of 60.1 teachers and 60% of pupils achieved A-C GCSE or equivalent (now known as the Level 2 Threshold). The report concluded that it was a school that had ‘many good and very good features’ (Estyn, 2010 p.3).

However, the catalyst for this research was that in the school’s previous inspection (Estyn, 2004), it was reported that the standard of delivery of ICT as a Key Skill across the curriculum was deemed to be unsatisfactory. The subsequent post-inspection action plan (School X, 2004, no page) sought to address this issue and set out six target actions, all of which had been met or exceeded at the time of this study, and the school had significantly expanded the number of computers available, in tandem with an upgrade of its computer network. Vigorous efforts had been made to address the identified inspection shortcoming, investing significant amounts of
capital expenditure, and thereby reflecting an institution that was cognisant of the advice that 'new technologies can be highly motivating and provide rich learning resources. They can generate interactive and imaginative responses from pupils and offer learning in a range of ways and times' (Estyn, 2007 p. 25)

The school had made substantial progress since its 2004 inspection, but the rate of progress in ICT is rapid. Even as far back as 1999 the National Advisory Committee on Creative and Cultural Education (NACCCE, 1999, p.21) observed that 'the rate of technological change is quickening every day. Information technologies are transforming how we think, how we communicate, how we work, how we play...'. Therefore, if the use of ICT in the school was deemed unsatisfactory in 2004, to have subsequently achieved the standard it should have attained then was simply not enough. The school should have progressed even further, towards the leading edge of educational development, utilising the financial investment to ensure that not only were inspection shortcomings addressed, but that it had surpassed expectations to establish ICT systems that promoted exciting and effective teaching and learning. BECTA, (2008d p.2) makes the point well:

In just a few years schools have made fantastic progress in securing good technology to support all aspects of school development. But this success means that priorities must shift to a new set of questions. All schools need to be asking themselves how the tools now in place can be used most effectively.

Indeed, ICT has become so central in our everyday lives and integral in schools that it now permeates a range of different areas. It has ceased to be solely a discrete curriculum area, and now encompasses much of the day to day normal school routine: monitoring attendance, storage of pupils’ details, storing assessment data, assisting teachers in planning and
developing ideas for their curricula and improving communication both within school and beyond.

Therefore, the introduction of a LP seemed the most logical next step in the school’s aim to improve the way that ICT permeated school life. The previous Westminster government stated that every school should be making full use of LPs by 2010 and set an interim target for ‘learners in every school to have access to a safe and secure personal, online learning space by March 2008’ (BECTA, 2008c p.2).

There can be no doubt that the rapid advancements in technology, and particularly the Internet, have paved the way for this next exciting phase in the history of education. We are on the threshold of a new educational age, in which our students must certainly be prepared for the technological world they will enter as adults. There is every possibility that they will have to adapt to technologies that have yet to be invented and quite likely that for many, the jobs that they will do will be new to this world and currently do not exist. It therefore makes sense that we, as educators, should now be reshaping our thinking about appropriate educational models for the future and consequently utilising web-based learning. As Oblinger (2008 p.20) clarifies,

Student needs and expectations, the technological and pedagogical tools available, as well as what it means to be educated in the 21st century are leading educators to envision education that is interactive, engaging and challenging. We are also learning that students may be among the best advisers on how to strengthen education.

Widespread Internet access has led to a situation where one can use the World Wide Web to create, to collaborate and to add comment. It is no longer just a medium for the receipt, transfer and sharing of information – although this remains a very important part of its
overall function. Indeed, recent developments have led to conditions that allow much more flexibility for learners, who ‘place a high value on the convenience technology provides, whether that means accessing course material from anywhere at anytime or being able to see course grades as soon as they are posted’ (Oblinger, 2008, p.12-13). Holmes and Gardener (2006, p.1) used the word ‘phenomenal’ to describe the interest in the increased access to education that e-learning is able to provide, and perhaps these developments, coupled with the transformational potential in this field (which now appears to be limited only by human imagination) may truly be described as such.

In a preparatory study for this work (Protherough Jones, 2008), I explored the extent to which my school had approached the inspection shortcomings, and I asked pupils at the school (n=147) about the use of web-based technology in education. The questions I asked related to the use of email, video conferencing, and school websites (including pupils’ perceived uses of the same). I discovered that 121 pupils had never emailed a piece of homework or coursework to a teacher, that 126 pupils had not been involved with video conferencing, that 64 had looked to see whether or not the school had its own website (at that time it did not), and that 116 felt that the school should definitely have its own website.

I concluded that the school had further work to do as a school website had yet to be launched and that this seemed to be a prerequisite for the creation of a fully functioning Learning Platform. However, it seemed that it was not only the research school that had work to do – a survey conducted by the Department for Children, Lifelong Learning and Skills (DCELLS, 2008 p.4) indicated that ‘over 50% of schools had a web-based learning
environment – although only a minority of schools were actively using ‘virtual learning environments’ to support learning and teaching’. One year on, however, there had been substantial progress in the establishment and adoption of LPs with 79 per cent of secondary schools using one (BECTA, 2009). By summer 2011, the research school had still not established an integrated LP.

Therefore, it seemed that there was a very strong, and possibly urgent, case for this research. The focus was relevant and topical, with the potential power to impact profoundly on the education of young people. Yet, to define the scope of the research seemed sensible and aiming to create optimum conditions for the successful launch and subsequent establishment of a LP seemed a worthwhile use of enquiry. Therefore, the research questions that this enquiry sought to answer were as follows:

1. To what extent are features of e-learning currently operational at the research school?
2. What is required of a Learning Platform at the research school, from the perspectives of teachers, pupils, and the Local Authority?
3. What does an examination of three other schools, that have received national acclaim for their Learning Platforms, reveal about the successful design and implementation of e-learning?

This research study would hopefully ensure that the school was impartially and appropriately informed, realistically advised and sufficiently prepared in order to offer students greater e-learning opportunities via an efficient and engaging LP.

**Methodology**

This was a collective, evaluative case study, investigating the main research school and the three other focus schools. It was vital that I established facts about the research
school’s current position regarding the use of ICT as a tool for learning, and how it fitted
into any plans that the LA may have for using new technologies in education. Clearly,
where there had been recognised exemplary practice in other institutions it would be
sensible to aim to discover their implementation and adoption procedures, as well as their
on-going sustainability strategies in order to generate data from which conclusions could
be drawn and recommendations made.

Data for this study were gathered through observation of practice in schools currently
using LPs effectively, through the use of questionnaires, interviews and documentary
evidence: I planned to involve a range of participants in order for the research to produce
a comprehensive range of data. Initially, via formal, semi-structured interviews, I sought
the views of members of my school’s Senior Leadership Team (SLT) and the school’s
ICT technician – these people were best placed to answer queries pertaining to research
question 1. Similarly, I consulted technical experts from within the LA ICT department as
the school received considerable ICT support from them.

Other schools, where LPs had already been successfully implemented, would also
provide a rich source of data and so I gained permission, from my headteacher, to
conduct fieldwork at two schools in England, both of which had won high acclaim and
awards for their LPs. I also hoped to visit a school closer, geographically, to the research
school, which had also been successful in achieving national recognition. I realised that it
was important for me to bear in mind the different funding policies for schools in
England and schools in Wales as this might have a bearing on what was realistically
achievable at the research school.
A broad span of respondents in schools was important because I wanted this research to take account of the views of a range of stakeholders. Pupils’ views were essential as they would, ultimately, be the end users of any LP introduced by the school. Teachers’ views were similarly invaluable because in order for a fully integrated LP to work, it is essential that teachers and other members of staff regularly access it, contribute to it and use it. I suspected that it might be more successful should they have shared ownership of it and knew what they wanted it to achieve. Also connected to this was a clear understanding of what staff training needs would be. Members of the school’s SLT would have a role to play in facilitating training provision, and so they needed to be involved in order for me to ascertain their level of commitment to the endeavour.

BECTA (2008a p.1) confirms the importance of involving some of the respondents mentioned above, stating:

Schools that are using their learning platforms effectively have told us that the essential elements for success are:
1. having the commitment of your senior leadership team
2. understanding what you want your learning platform to do for you
3. ensuring appropriate and timely training and support for staff

This statement seemed to provide a sound basis from which to proceed, suggesting three foci to bear in mind as I conducted the enquiry.

**Research Timetable**

Due to personal circumstances, there had been a break of around eighteen months from when I began to plan this study to implementation of that plan. This meant that I needed to be very focused in my work, and cognisant of potential changes and developments in the field during the hiatus. A full research timetable can be found in Appendix I, however a brief outline is given below:
April 2011

- Review and completion Milestones 1 and 2, taking into account any recent literature that could inform and enhance this enquiry
- On-going reading and Internet searches

May 2011

- Revision and completion of Milestone 3
- Ongoing reading of relevant literature
- Design of research instruments

June 2011

- Fieldwork
- Begin to analyse and reflect on data gained thus far
- On-going reading of relevant literature
- Evaluate methodology
- Plan presentation of results, ensuring that this refers back to the research questions
- Draw draft conclusions and recommendations
- Prepare Milestone Four

July – August 2011

- Reflect on current status of research
- Amend and adjust as necessary

September 2011

- Prepare Milestone 5 section – Title and Abstract
- Prepare final submission, ensuring that format is correct
**Ethical Considerations**

In planning this project I was aware of the ethical guidelines set out by the British Educational Research Association (BERA) in 2004. In particular, as much of this work would be ethnographic in style, I took note of paragraphs 8 to 12 (BERA, 2004, pp.5-6). I was aware that before observations and interviews could proceed I had to ensure that I obtained voluntary informed consent. All participants were given full information about the project, and I had taken note that they 'should not be expected to sign any protocol form unless they have had time to read and consider the implications' (Bell, 2005, p.57).

I hoped that at least some of those involved would be interested in the results and that they would view the research as a means to further strengthen the developments in ICT already underway at the research school. Clearly, therefore, I did not in any way seek to deceive any participants. Indeed, if at any stage a participant felt uncomfortable with the research project in any way, they were reminded of their right to withdraw from it.

I also ensured that I complied with Articles 3 and 12 of the United Nations Convention on the Rights of the Child (UN General Assembly, 1989). Information leading to the improvement of educational conditions was at the heart of this research, so the best interests of the child were also central in its conception. As a teacher I was subjected to all relevant and appropriate Criminal Records Bureau checks and complied with the requirements of law regarding work with school children. I strove to ensure that schools and individuals were not identifiable, and that the data were treated sensitively and with confidentiality.
Part Two – Reviewing the Literature

**Literature Review**

The material selected for this review, spanning 1997 to 2010 (with the majority clustering between 2007-2009), was chosen for its relevance to the subject matter and context. It was important that the material would make sense when applied to a secondary school because the anticipated outcome of the study was to offer a clear steer regarding the direction the research school should take in implementing a substantial technological tool for enhancing teaching and learning. Interestingly, few books emerged from searches through library catalogues and the Internet. There were more journal articles, but far more papers from government and government agencies. I knew that it would be important to consider the government papers, as the shape of policy itself was guiding the principles behind this study. However, I felt that I should also be mindful of the possibility that government policy might not necessarily be in line with achieving the most appropriate route forward. Thankfully, there were some evaluative studies that considered the early implementation of government policy, which helped to achieve a balanced reflective viewpoint (BECTA, 2008a; BECTA, 2009; OFSTED, 2009).

**Background**

The use of LP technology in schools is relatively recent, so was it as widespread yet as the government (DfES, 2005) might have wished? Two of the government’s stated objectives were that: ‘by spring 2008 every pupil should have access to a personalised online learning space with the potential to support an e-portfolio (provided by their local authority) and that by 2010 every school should have integrated learning and management systems (a comprehensive suite of learning platform technologies).’ (BECTA, 2007, p.3)
Also, in Wales as far back as 2001, (National Assembly for Wales, 2001, p.25) government saw the potential for ICT and set out its vision:

We see secondary schools, in particular, moving away from rigid timetables, and even classroom based teaching, to very much more flexible modes of provision tailored to the needs of the individual learner and supported by ever strengthening distance learning and ICT.

Policy from government had set out a vision for how schools might embrace new technology in shaping education provision. I hoped that this study might provide an insight as to how those government intentions were manifest in our schools.

**Definitions**

Advancements in ICT are now so rapid across the globe, with new terminology often becoming added to our lexicon. It was, therefore, important to define the terminology used in this study, which principally uses the term ‘Learning Platform’. The Department for Children, Lifelong Learning and Skills’ (DCELLS) Schools’ ICT Strategy Working Group (DCELLS, 2008, p.37) explains:

A learning platform is an umbrella term used to describe software whose core role is to deliver and support online learning and teaching in some way... Learning platforms can range from products which provide electronic learning resources and facilities for uploading your own and third party learning content, to more complex systems that not only allow practitioners and learners to upload resources, but include a learner tracking system, communications tools, online assessment, and the ability to share data with existing management information systems.

This seemed quite straight forward, but there was potential for confusion, as different writers had used other terminology to describe technological applications that were essentially the same thing. The Office for Standards in Education (OFSTED, 2009, p.8) spoke of the Virtual Learning Environment (VLE) and how terminology could be interchangeable:
VLEs might also be called a learning management system (LMS), course management system (CMS), learning content management system (LCMS), managed learning environment (MLE), learning support system (LSS), online learning centre (OLC) or learning platform (LP).

One might begin to understand, then, why simplification and clarity of terminology would be important for the reader's comprehension of this study. OFSTED (2009, p.8) continues:

Many terms and systems are associated with VLEs. One used routinely is managed learning environment: this usually describes the infrastructure needed to deliver the VLE, and may include other aspects linked with learning, such as attendance records, reports or room allocation. The combination of a VLE and managed learning environment is sometimes known as a learning platform.

Hopefully this clarifies exactly why I chose to use 'Learning Platform'. It is a term that overarches the others, and one that I believed would be the most appropriate and maybe eventually the most universal. Indeed the British Educational Communications and Technology Agency (BECTA, 2007, 2008a, 2008b, 2008c, 2008d, 2008e) seemed to have settled on 'Learning Platform' for most of its publications on this subject. However, the reader should be mindful that there are occasions when other authors are cited in this text where alternative terminology, as discussed above, is used.

**Context and Scope**

Despite education being one of the policy areas where decision-making powers are held by the Welsh Assembly Government (WAG) and which, therefore, creates the possibility of being distinctly different to England, the literature revealed that the widespread development of LPs was an aspiration common to both countries. Therefore it was important that this study took account of policy and context in both countries. Indeed, BECTA appeared to deal with England and Wales as one, and in its annual awards for excellence both Welsh and English schools had featured as winners. However, Wales seemed to have more work to do than England in enthusing schools to pursue the potential benefits of e-learning.
In evaluating the impact of funding for the provision of ICT in schools, Estyn - the Office of Her Majesty's Inspectorate for Education and Training in Wales (ESTYN, 2007, p.16) discovered that:

A minority of schools and LEAs [Local Education Authorities] are developing Virtual Learning Environments (VLEs)... This is in the early stages of development and there is no clear evidence yet of the impact on teaching and learning. There are currently no detailed plans in place within schools and LEAs to evaluate their effectiveness.

There was conflicting evidence from DCELLS, (2008, p.34) however, as it stated that ‘many schools have already discovered for themselves the benefits of providing a secure online learning environment which allows their learners to access learning outside school and to share their learning with one another’. ‘Many’ versus ‘a minority’, led me to seek out further clarification of the position in Welsh schools. There was no need to look far, as in the same DCELLS report (2008, p.4), their ‘many’ was qualified with the following:

Over 50% of schools had a web-based learning environment – although only a minority of schools were actively using ‘virtual learning environments’ to support learning and teaching.

One of the recommendations of the DCELLS report was that LPs were to be established in all schools – surely nothing new in this, in view of the 2005 aims of the government e-strategy set out in Harnessing Technology (DfES, 2005).
Benefits

Why, then, was there such a keen attitude on the part of the government and government agencies to encourage schools to adopt LPs?

For some time, researchers had concluded that the use of LPs returns benefits for stakeholders. Two of the most common benefits are improved motivation and engagement for learners (Watts and Lloyd, 2000; Wilson and Whitelock, 1997) and the flexibility of access, sometimes also referred to as anytime, anywhere access (Jacobsen and Kremer, 2000). This was reinforced with some of the more recent published research, which added further detail in the light of recent technological developments and more widespread use of LPs (DCELLS, 2008; OFSTED, 2009). Indeed, OFSTED (2009, p.13) confirmed the benefits mentioned above, and in addition suggested:

- allowing learners to catch up on missed lessons, with links to improved retention
- improved control, by provider and learner, of assignments and associated feedback, and general coursework
- saving costs and effort in printing...
- better paced learning for individuals
- help for excluded students

In those institutions that were already systematically using a LP, OFSTED (2009,p.14) also found that almost all learners used the technology to submit and receive coursework assignments, in some cases very late at night or in the early hours of the morning. Learners themselves felt that the LP was useful as a method of organising the submission of coursework through the online publishing of deadlines and issuing of reminder notices. They also liked being able to access course material digitally rather than having a lot of paper, such as handouts and course specifications.
BECTA (2008f, p.2) noted that general benefits of using a LP included the fact that ‘software has a consistent look and feel across the whole organisation’, and that ‘communication channels are increased through email, discussion groups and chat rooms’. Email is now a regularly used feature of ICT, to the extent that one could say that it has permeated modern culture. It was indeed difficult to imagine learners, teachers, parents, school governors, LEA representatives, government departments not using or not knowing how to use email. Yet, the same might not be said about establishing and running discussion groups, which is perhaps less familiar for adults not born into a digital age, Prensky’s (2001, p.1-2) “digital immigrants”, than for the majority of learners – the “digital natives”. Such discussion groups or ‘forums’ have significant potential for educational use as noted as far back as Gibbs (1999). Yet exactly how prevalent were they in our schools, and what paradigm shifts might be needed in order to tap into their potential? Was more specialist knowledge / training necessary in order for some aspects of LPs to be used effectively? It seemed possible.

**A need for training?**

DCELLS (2008, p.5) pointed towards individual teachers’ ICT knowledge and enthusiasm for technology driving technological developments, finding that:

> Good practice is limited to those departments where the teachers understand the benefits of ICT, and are enthusiastic about it in their lessons. In other departments, good practice is absent or limited to one or two teachers in the departmental team.

Yet OFSTED’s (2009, p.12) survey of forty-one educational providers confirmed that enthusiasm was a key reason why a subject area was well represented within a LP, but also stated that it ‘found no direct correlation between computer expertise and VLE development;

…the more skilled and confident teachers and tutors... treated the VLE as an extension of their
normal work’. This suggested that innate enthusiasm for teaching, and subsequently the quest for finding new and exciting ways of presenting learning was central to the successful development of the use of LPs. Technology, it implied, should not be an obstacle for a dedicated teacher wishing to further their professional effectiveness. At a time, when teachers have to set performance management objectives and identify their own professional development targets, it was suggested that insufficient training should not be a barrier to the effective use of modern learning technology, although additional financial pressures upon schools could mean that such training would now need to be more carefully targeted and linked to school improvement objectives. The OFSTED survey (2009, p.7) recommended that in terms of staff development, ‘systems where whole institution events concentrate on understanding the potential benefits of the VLE and sharing of good practice, as well as a general awareness of strategy, while skills needs are met on an individual basis’ would keep the focus of the institution firmly on the bonuses of using a LP, while the individual teacher could then identify and address their own training needs. Whole school training, then, could be very much at the core of the implementation and embedding of the LP.

**Access to personalised learning**

The Learning Country (National Assembly for Wales, 2001, p.10) suggested that schools could ‘use ICT to transform teaching and learning and to customise and refine learning experiences tailored to the needs, aspirations and potential of individuals’. The use of technology to deliver learning that is more personal to the learner was, perhaps, one of the benefits that caused excitement about the use of LPs. BECTA (2008c, p.2) in its guide for school leaders confirmed that ‘Personalising learning is at the centre of national aspirations for education...learning platforms are critical to these ambitions’. But this, of course would only be possible if learners had access to computers, both in and away from the school. I knew that not all learners had
access to a computer at home and even in those homes that did have computers, not all of them would have high-speed broadband connections, which are crucial for downloading some types of files, such as media files (film, photograph, music). However, availability for the public has opened up considerably in recent times, with access to the Internet through public libraries and so called Internet cafes. Hargreaves, (2005, p.31) noted:

The proportion of students who have access to a PC and the Internet from home or from some other convenient source is rising rapidly. Using ICT to enhance home-school links and to enlist the support of parents in their learning, students have out-of-school access to a wealth of resources and indeed spend four times longer on ICT at home than they do at school. They can communicate easily by email and related systems with peers and with staff.

This had progressed further, as one might expect, to the point where 84% of homes with school aged children had computers with Internet access by 2009 (OFCOM, 2009). One should be mindful, however, that this statistic represented an average taken across all households: BECTA (2009) noted that there was wider variance between richer and poorer domiciles, with 97% from top earners and 68% of lower earners having access to the technology.

Yet despite the statistics above, the use of LPs could also be seen as a way forward in terms of widening opportunities regarding the range of courses that pupils can choose to study. This could be seen as particularly appropriate at a time where schools and colleges have to collaborate much more than ever before in order to ensure that the courses they offer are financially viable. Such use of ICT might also be seen as particularly appropriate for opening up opportunities to learners in the traditionally more remote parts of the country:

Greater use of technology could help to share teaching and learning across schools...pupils in rural areas can remain in their local schools but have access to a broader range of subjects via e-learning (Estyn, 2007, p.25)
However, in the OFSTED (2009, p.6) report, ‘only one example was seen of the use of a VLE across a consortium for use in the diplomas for the 14-19 age group’, and the report went on to recommend that LPs should be used, where possible and appropriate, in consortia and shared provision for this age group.

**Effective Uses of a Learning Platform**

As part of its work to support the implementation and effective use of LPs, BECTA (2008g) produced a DVD and accompanying booklet exploring successful current LPs ‘in action’. These snapshots gave some insights into what one might look for in an effective example.

In example 1 (2008e, track 2), the teaching of Art was featured. The teacher concerned had been teaching for 10 years and regarded the use of the LP as a new and exciting development. This example illustrated the potential for colleagues to share resources and adapt material to suit themselves: the teacher commented that, ‘The brilliance of all this, is when we start sharing beyond us, in the art room…sharing resources across the country, finding others [in different schools] that we want to work with’. In describing how a personalised learning course had been created for a pupil who didn’t want to engage in courses in a traditional way, he illustrated how pupils would contribute to discussions more freely as part of a forum than if they were live in the classroom.

Example 2 (2008e, track 4) focussed on parental engagement and how video conferencing could be used to have a live online parent/teacher discussion. A postcard was sent home inviting parents to join an online ‘meeting room’ at 8pm. Parents could type text questions or add comments, and if anyone missed the opportunity to participate live, the whole event had been recorded and could be downloaded from the LP at a later date to see if they had missed anything of importance to them. This seemed like a particularly effective use of a LP and one
that would be of great benefit to schools and parents alike. Harris, Andrew-Power and Goodall (2009, p.79) concluded that ‘parental engagement needs to be at the core rather than the periphery of schooling...It needs to be centre stage. It is the most powerful school improvement lever we have. So let’s use it’. However they recognised that achieving this could be difficult and that making it happen could be challenging. The use of a LP might help to operate the school improvement lever with a little more ease.

**Leadership and Management**

The examples above provided recent documentary evidence of some of the ways in which schools were imaginatively using LPs to support their work. They provided a point of reference from which to compare the work of other institutions and inform the research school at the centre of this study. However, what they did not do was provide a clear insight into the leadership and management of change that brought about the successful e-learning outcomes.

Effective leadership and management seemed to be vital if such an initiative is to be successful. In its study, OFSTED (2009, p.6) noted that ‘the best VLEs had strong support from senior managers with good resources for development and maintenance’. Yet only three of the thirty-five schools studied had a strategic policy for such development, hence the following recommendation (OFSTED, 2009, p.7) that ‘providers should develop VLE strategies that identify senior management responsibilities’. In the absence of a coherent strategy, most of the schools in this study had developed their LPs from a small-scale beginning, which had then grown over time. I wondered if experience will teach that this is the best approach or if, indeed, following a carefully considered strategic plan and then launching a fully functioning LP would be better.
PART THREE – RESEARCH METHODS

Methodology

Overview

Research has been defined as ‘the systematic gathering, presenting and analysing of data’, (Bartlett, Burton and Peim, 2001, p.39) and planning how to best achieve this is a key consideration. Two of the most common methodologies are case study and action research, with many teaching practitioner-researchers involved in the latter. Mertler (2009, p.4) described action research as ‘research that is done by teachers for themselves’. In essence, it involves making a change locally (in one’s classroom, for example), and evaluating the impact of that change. The researcher is at the heart of the process, actively participating as what Gray (2004, p.374) describes as an ‘agent of change’. Taylor, Wilkie and Baser (2006, p.6) indicated a cyclic nature in this methodology: having identified a perceived area for change (i.e. the subject of the research), interventions are made, the results analysed, and further interventions made as necessary. The researcher aims to continually link reflection to practice.

Given the nature of this study, it seemed that action research would be unsuitable. The issues herein involved implementation of a whole school system that theretofore had not existed, and which (given the scale of the task) would have limited scope for further intervention once the system was operational. Therefore, case study was considered a more suitable methodology. As Stake (1995, p. xi) indicated, it ‘is the study of the particularity and complexity of a single case, coming to understand its activity’, which seemed far more appropriate here. A case study would enable direct insights into how others had approached establishing LPS. Multiple case study methodology was used, as it seeks to establish key factors, as learned by other institutions. As Yin (1994) noted:

A common example is a study of school innovations (such as the use of new curricular, rearranged school timetables, or new educational technology), in which individual schools adopt some innovation...
evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust. (Yin, 1994, p.46)

Encouragingly, Taylor, Wilkie and Baser (2006, p.4) explained that, ‘the resulting data can be rich and highly descriptive, providing an in-depth picture of a particular event, person or phenomenon’. However, I was cautious that the arising account should not simply be descriptive, and took care to evaluate and interpret data in order to achieve a properly considered and informed opinion (Freebody, 2003, p.81).

Validity

A piece of research should be deemed valid to have any merit. In considering validity there are two acknowledged measurements, i.e. external and internal. External validity deals with how generally the research findings can be applied, Miles and Huberman (1994, p.279) term this ‘transferability’. Internal validity, on the other hand, concerns the extent to which the research achieves what it intended to achieve.

In terms of qualitative research, such as this, it has been argued that external validity is inappropriate, ‘since it contradicts the epistemological and methodological perspectives in this approach’ (Wilson, 2009, p.118). However, it has also been suggested that if the description of the case is rich enough in terms of the analysis and interpretation of events and behaviours, then it could be possible for ‘someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility’ (Lincoln and Guba, 1985, p.301). I believed that there should be some transferable aspects in this study, which might subsequently inform others seeking to implement a learning platform.

Internal validity is more commonly considered to be more important in qualitative study. Cohen, Manion and Morrison (2005, p.105) echoed the points made above that, ‘in qualitative data validity might be addressed through the honesty, depth, richness and scope of the data achieved’. I intended to present the findings of this study as fully as possible, in an interpretive
manner, and such that they were evidently linked to the methods of obtaining the data. Triangulation was an important tool to help ensure validity, and the use of different research instruments to probe for answers to my research questions was a deliberate, planned intervention to ensure that I could have 'greater confidence in [my] research findings' (Mertler, 2009, p.11).

**Reliability**

Reliability has been referred to as 'the rigour, consistency and, above all, trustworthiness of the research' (Wilson, 2009, p.116), and it was certainly hoped that these tenets were applicable in this study. The key question was: would someone else on a different occasion return the same conclusions that I reached? By specifying the nature and number of the sample in each case, the fact that documentary evidence should not alter significantly in the foreseeable future, and including both examples of questionnaires and a record of the questions used to steer the semi-structured interviews, for future reference, it was hoped that replication, to some degree, might be possible. However, Wilson (2009, p.116) continues:

> 'the chances of a qualitative study ever being repeated in the same context using the same informants and procedures by an independent researcher are remote or even, some would say, impossible since the context-dependent conditions of qualitative research are constantly subject to change

Others, e.g. Cohen, Manion and Morrison (2005, p.119), contend that the essence of ‘naturalistic’ research necessitates accepting the distinctive and individual features of the studied environment, and that this should be viewed as a ‘strength rather than… [a] weakness’ of the methodology.

**Sampling**

The sample included:

- the research school itself, to determine its current position and future needs
• three secondary schools that had successfully implemented learning platforms
• the research school's Local Authority, given possible implications in terms of compatibility with the wider infrastructure within which any future learning platform at the research school would have to sit.

More specific information regarding sampling is given in the following paragraphs.

**The Research Instruments**

In planning this study, the research instruments were selected according to their ability to provide the data required to reach a valid outcome, and ways of cross-checking the findings of the research for reliability (i.e. using more than one research instrument in order to provide triangulated data) were considered.

An ideal scenario would have afforded the opportunity of ethnographic research, spending a substantial amount of time in each school. However, time available at each case study school here was a limiting factor and it was only possible to spend between four and five hours at each. Therefore, a combination of observations, interviews, questionnaires and examination of documentary evidence was used to triangulate data, given a paucity of time to conduct more immersive ethnographic study.
The following table shows the methods and sample selected for each research question:

**Table 1: Methods and Sample for each Research Question**

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Methods</th>
<th>Sample</th>
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<tbody>
<tr>
<td>1</td>
<td>• Interview</td>
<td>• Pupil focus group (n=4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ICT strategy leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Technician</td>
</tr>
<tr>
<td></td>
<td>• Questionnaire</td>
<td>• Teaching staff, (n=20)</td>
</tr>
<tr>
<td></td>
<td>• Observation</td>
<td>• Three lessons demonstrating current use of ICT</td>
</tr>
<tr>
<td>2</td>
<td>• Interview</td>
<td>• ICT strategy leader</td>
</tr>
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<td></td>
<td></td>
<td>• Local Authority officer</td>
</tr>
<tr>
<td></td>
<td>• Questionnaire</td>
<td>• Teaching Staff (n=20)</td>
</tr>
<tr>
<td></td>
<td>• Documents</td>
<td>• Local Authority Documentation</td>
</tr>
<tr>
<td>3</td>
<td>• Interview (at each case school)</td>
<td>• Strategy Leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Focus Group - Subject Leaders (n=4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Year 7 Pupil Focus Group (n=4)</td>
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<tr>
<td></td>
<td></td>
<td>• Year 10 Pupil Focus Group (n=4)</td>
</tr>
<tr>
<td></td>
<td>• Questionnaire (at each case school)</td>
<td>• Year 7 Form (n=c.25)</td>
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<td></td>
<td></td>
<td>• Year 10 Form (n=c.25)</td>
</tr>
<tr>
<td></td>
<td>• Observation</td>
<td>• Pupil and staff use of the learning platform.</td>
</tr>
<tr>
<td></td>
<td>• Documents</td>
<td>• From each case study school</td>
</tr>
</tbody>
</table>
Documentary Evidence

The examination of any printed materials that participants may have produced should prove to be a worthwhile activity. It was, however, understood that some of these primary sources might actually need to be regarded as inadvertent sources because they were to be used for a purpose other than that which was originally intended (Bell, 2009).

Reliability was very important in this study, but it would have been wrong for me to dismiss such sources. Therefore, they were admitted as forms of evidence, and the confirmation of their validity and reliability was sought by triangulating the information they provided, through interviews, questionnaires and by observing policy translated into practice.

Observation

By observing learners and teachers it was possible to derive valuable data. Attitudes towards the technology, levels of enthusiasm and skill in using it could all be noted, and it would also be possible to ascertain knowledge and understanding of its potential to affect teaching and learning as a tool for improving standards. It was anticipated that an impression of users' levels of confidence in using the learning platform would be gained. As Stake (1995, p.60) notes, 'we need observations pertinent to our issues'.

Care was taken to observe the research participants working in as natural a way as possible. The use of observation schedules was considered, but the decision taken to be guided by the research questions and to adopt a flexible approach. Given that the context or content of each observed use of the learning platform was an unknown factor, an open approach to the observation was deemed to be the most useful rather than perhaps having a checklist. One potential problem with this was that it might make the cataloguing of the data more difficult. However, provided the importance of focussing on the research questions remained paramount,
and subsequent analysis aligned to these, I thought that the observations would be both valid and valuable sources of evidence.

Another concern was that of being a stranger to the pupils, as this might have affected the way that they behaved in the situations observed, the so-called ‘Hawthorne effect’. To hopefully counter the potential for this, I planned to remain as peripheral to the situation as possible for much of the time. This way the pupils would have a chance to become used to me and the observation would perhaps seem less significant to them, i.e. any reactivity would be minimised. Indeed, observations have become much more common in schools now than in the past, and young people are more used to the presence of additional adults in the room to the extent that this concern might even have been unfounded. Nonetheless, it was particularly important that all research participants, and especially pupils, felt that this study was being conducted on the basis of trust and honesty, and by being natural, honest and open with them I could ensure that there was no contravention of paragraphs 12 and 18 in the BERA ethics document (BERA, 2004, pp.6-7).

**Interviews**

Stake (1995, p.66-67) explained that, ‘It would be good if we could get what we need by observation alone. But often we have too little time and have to rely on what others have seen...so we interview’. Certainly, given the potential amount of time that the observation could take, and the constraints of time brought about by my commitments as a full time teacher, interviewing was important in this investigation.

In order to triangulate data, interviews were conducted with a variety of participants: the perspectives gained had the potential to be both interesting and informative. Pupils in particular, might share information that they might not feel as comfortable sharing with adults more familiar to them. As Hopkins (2002, p.111) indicated, this was an advantage of my
position as researcher, ‘Pupil(s) [are] frequently more candid with the outsider than with the class teacher’.

I decided to record the interviews, provided that the interviewees were comfortable with the arrangement. It was explained that:

- the recordings would only be used for the purposes of this research
- the main reason for recording was to ensure that as much of their valuable input as possible was retained, and that any quotations used from the interview were accurate
- the files would be deleted when the study ends

An MP3 recorder was used, to allow quick and reliable back up of data, and the ability to label files quickly and easily, thereby assisting in the analysis stage.

Although there are both advocates and opponents of transcribing recordings, Bell’s (2009) views were noted:

> many experienced researchers feel strongly ...that all tapes must be transcribed. They make the point that if no transcription is done and made available for scrutiny if required, then interviewers can say what they like...

(Bell, 2009, p.164)

The scale of this project, however, resulted in the acceptance that the full transcription of any recordings made would be very difficult to achieve. The advice of Walford (2001) was taken in arriving at this position: he was of the opinion that each case should be taken on its merits.

**Interviews with adults**

Adults from each participant organisation would be interviewed both individually and in focus groups. Interviews with subject leaders would be conducted as a focus group in each of the case study schools, with approximately four respondents in each (representing a range of subjects). Other interviews, e.g. with ICT strategy leaders were conducted individually.
Dowling and Brown (2010, p. 78) articulated thoughts about interviews that were precisely relevant in this study. They commented that:

the prime concern of the interviewer might be to explore the world from the perspective of the interviewee and to construct an understanding of how the interviewee makes sense of their experiences. In this case the use of standard questions and a fixed format would be unduly constraining.

This, indeed, reflected an approach that seemed most appropriate for finding out about something that was embedded across a school and was, consequently, part of its 'world'. Therefore interviews were semi-structured, guided by the research questions with further questions for amplification, and the path that the interviews might take having been considered beforehand. Taylor, Wilkie and Baser (2006, p.37) advised, ‘know what you want to ask’ and it certainly seemed folly to embark otherwise. However, it was intended that the discourse would be flexible, enabling, as far as possible, the interviewees to talk freely. It was possible that digression arising from various personal viewpoints might move along valid and illuminating tangents.

**Interviews with pupils**

In each school, I planned to interview pupils in Year 7 and Year 10 in order to understand their views about the use of the learning platform in their school. I believed that meeting pupils in focus groups of three or four would provide the best conditions for discussion, which was supported by Wilson (2009, p.90) who suggested that this approach could be ‘useful for revealing, through interaction, the beliefs, attitudes, experiences and feelings of participants’. The contention was that meeting as a group will be less daunting than being interviewed individually and it also avoided any ethical concerns, e.g. individual pupils being left alone with an adult other than their class teacher. However, as Taylor, Wilkie and Baser (2006, p.38) suggested, in focus groups, ‘answers may be influenced by the social nature of the exercise’
and I was, of course, cognisant that in any group dynamic strong personalities may dominate and that the quieter ones should get an opportunity to share their views.

Walker and Adelman (1990) suggested that pupils might worry that they could be asked to give an opinion that they deemed to be incorrect. Therefore, I had to clearly communicate that all their views were important, that there were no right or wrong answers and that the interview was not a test of any kind.

I therefore decided to keep the interviews with pupils as informal as possible. However, I intended to use a similar structure with each group and follow the same line of questioning — again guided by my research aims, in order to simplify analysis. Examples of the questions can be found at Appendix II.

**Questionnaires**

The research instruments above were designed to return qualitative data, as a result of time spent with relatively few respondents. Those instruments were both valuable and essential in determining practices in the case study schools, and they were also very important in gathering data from the research school and the Local Authority. However, gathering data from more pupils would provide a fuller picture regarding the impact that this new technology could have on the end user, i.e. the schools.

Therefore a wider sample was invited to contribute via a questionnaire (Appendix III). The decision to use this method was carefully considered, as there are often pitfalls associated therein (Bell, 2009; Wilson, 2009; Lowe, 2007; Cohen, Manion and Morrison, 2005). However, given the nature and scope of this investigation, I felt that using questionnaires matched the purpose of the research, and was relevant.

The questionnaires were completed by a larger sample of the same age pupils who were interviewed, and similar questions were asked. This was in order to seek triangulation, thereby
giving greater credibility to the data. Some consideration was given to the administration of the questionnaires, since it had been noted that mailing questionnaires to respondents has the potential for lower return rates. An online survey was considered but having discovered that ‘response rates to some online surveys may be particularly low, as low as 10 per cent’ (Dowling and Brown, 2010, p.73) questionnaires were hand delivered to the schools at the time of the visits and either posted back (a stamped, addressed envelope being provided) or collected by hand.

Form groups completed the questionnaires during a pastoral period. The benefits of this being:

- it did not impact upon subject teaching time
- it was likely to provide a response from pupils of mixed academic ability

I thought that if the schools agreed to allocate the time to this activity, a short briefing meeting could be arranged with the form tutors to ensure consistency of administration. They would then be able to communicate the procedure and clarify anything with the pupils, also ensuring that there was a high rate of completion and return.

A sample of twenty adults from the research school was also invited to complete a questionnaire (Appendix IV) in order to discover their perceptions of the concept of a learning platform, any experience they may have had of one, and their attitudes towards the introduction of one. These could be returned to me directly via my pigeon hole.

**Piloting**

Piloting of questionnaires took place to safeguard against ambiguity and misunderstanding, and to ascertain if the questions actually allowed the effective gathering of suitable data, within an achievable time frame (Lowe, 2007, p.41). My own children and their friends were used in the piloting of the pupils’ questionnaire, as their school had a learning platform and they were therefore likely to understand more fully than if I had used pupils from the research school.
(who were not familiar with the concept of a learning platform and therefore would be an ill-considered choice). I piloted the staff questionnaire with a member of my own department (who was subsequently not involved in the sample). The pilot exercise allowed a preliminary analysis of the data, as I recognised that I should consider ‘how responses will be analysed at the design stage, not after questionnaires have been returned’ (Bell, 2009 p.136, italics in original).

**Procedures and Ethical Considerations**

The study was formally discussed with my headteacher in order to gain informed consent to use some school time for research, before contacting the headteachers of the other schools to secure their agreement. I contacted them by telephone initially, explaining the nature of the study and asking them to discuss the matter with their staff. I acknowledge that the time of others is precious, and that all intended participants should therefore have the time to consider and the opportunity to decline their invitation to contribute. It was understood that obtaining fully informed consent was essential in order to gain access to the research field and be accepted as a credible investigator. (Cohen, Manion and Morrison, 2005).

After approximately one week, in order for the informal discussions with staff to take place, a written agreement (Appendix V) was mailed to each headteacher for consideration and signing, together with copies for the other participants. This ensured compliance with the guidelines set out regarding voluntary informed consent by the British Educational Research Association - BERA (2004). In the written agreement the research questions were set out, together with the proposed methods, and reference to the BERA (2004) guidelines regarding ethical conduct and anonymity. Permission was sought from the headteachers *in loco parentis* for pupils to participate, and there was an opportunity for respondents to raise any concerns they might have. A similar procedure was adopted when seeking to involve participants from the research school and staff from the LA.
PART FOUR – THE RESEARCH REPORT

Evaluation of Methodology

The aim of this study was to reveal indications regarding the optimum operational mechanisms by which a LP, might be implemented in a co-educational 11-16 school in the south Wales valleys. In order to achieve this, case study was selected as the most suitable methodology, examining the research school and three other schools that had all successfully implemented a LP. Freebody (2003, p.81) referred to case study as being based on the ‘overwhelming significance of localised experiences’, and it was precisely this that I wanted to capitalise upon. I felt that in order to gain an understanding of how best to approach the institutionalisation of a new teaching and learning initiative, it made sense to gain an informed sense of the conditions and attitudes at the research school as well as the ways that the other schools successfully addressed this task. As Bell (2009, p.10) notes:

All organisations and individuals have their common and their unique features. Case study researchers aim to identify such features…to show how they affect the implementation of systems and influence the way an organisation functions.

The three case study schools were selected because they had won awards for their work in using ICT to enhance learning, and all had fully functioning learning platforms. However, I soon encountered an enforced change to my plans, because when confirming that the research could take place with the headteachers, one of the schools explained that they could no longer participate. The school, which had developed its own learning platform, had arrived at a position where it felt it could go no further with its own resources. Having reached the limits of its technical team, the school had decided to adopt one of the commercial solutions available instead and was in the process of transition at the time I wanted to visit. Although at first I felt that the study was impeded, I subsequently realised that this confirmed the reasons for my initial choice of that school. The fact that it had identified a need to further enhance the functionality of its system, and therefore make further progress in seeking the next stage of its
LP journey, showed it to be a strong adopter of the new pedagogical model. I was now faced with a dilemma: to continue the research with only two schools or to seek out an alternative. Having considered these options I felt that I should still work with three schools if possible, to broaden the viewpoint and give greater depth to the findings.

Fortunately, I knew of a school that might provide an interesting alternative. It was quite close, geographically, to the research school but it had not achieved the same level of recognition for its use of ICT as the other schools. Moreover, it had only recently launched its learning platform. Having pondered this, I felt that it might be advantageous to include this school in the research, as the implementation stage would still be fresh in the minds of the participants. Furthermore, comparing a recent implementation with others established for five or more years would, perhaps, bring a valuable perspective to the data. Had they, perhaps, learned from others – or had they proceeded another way? I decided to include them in the study and, having sought the necessary permissions, they became ‘school C’.

With the necessary voluntary informed consent having been obtained, I progressed using interviews, questionnaires, observations and examination of documents as my data collection instruments. This combination of methods enabled me to triangulate findings by gaining opinions from a broad range of participants. By analysing and comparing the data from the case study schools, I was able to consider any emergent common themes in terms of whether they could be applied at the main research school – Bassey (1981, p.85) termed this ‘relatability’. He regarded this as important in evaluating the research:

> An important criterion for judging the merit of a case study is the extent to which the details are sufficient and appropriate for a teacher working in a similar situation to relate his decision making to that described in the case study.

(Bassey, 1981, p.85)

I ensured that I replicated, as far as possible, the data gathering at each of the case study schools. The same questionnaires were administered, to a similar number of the same year
groups of pupils. The process of delivery had been thought through in advance and it seemed to present no major difficulties other than the fact that the number of respondents varied slightly in each case, due to unforeseen pupil absences. I did not see this as a major problem, however, as the differences were of only one or two pupils. Another dimension that I was unable to replicate exactly was that of the adults taking part in interviews representing the same subjects. Although this would have been preferable, given the constraints of time I was obliged to work with the schools and accept staff that were available and willing to participate.

**Evaluation of Interviews**

**Interviews at the research school**

The interviews at the research school were illuminating, as they allowed me to gain insights into practice from the perspectives of pupils, the member of SLT tasked with leading the ICT strategy, and the ICT technician. The latter two interviews were piloted with a member of the ICT teaching staff, who had some knowledge of the overall school strategy – it would have been difficult to have piloted with someone who did not. The pilot revealed that the planned line of questioning was suitable, and achievable within a reasonable time frame. The interviews with these adults ran smoothly, with the respondents offering clear theoretical and practical understanding of the current situation at the school.

I piloted the pupil interview with my daughter (who does not attend the research school), which revealed that some reordering of the questions was advisable because there was a lack of flow to the line of questioning (even though the interviews were to be semi-structured, this amendment was sensible).

The pupil focus group seemed to work particularly well, and I was glad that I had given some thought to its composition – using pupils from different years but who knew each other well
due to common participation in the same extra-curricular activity. I had also noted the comment made by Lowe (2007, p. 82) regarding getting the size of the group right:

The size of the group is an issue – too large and there is a danger that individual voices will not be heard, too small and respondents may not readily share information.

The four pupils were well known to me, and this was advantageous in that the process was relaxed and they knew that I was not looking for any specially prepared answers. They were told that they could withdraw from the interview if they so chose – none did.

**Interview with the Local Authority Officer**

As a change manager for the LA the interviewee was responsible for significant aspects of the LA’s school improvement strategy in which ICT plays a central part. The interview questions were discussed with a member of my SLT, as a pilot – the full extent of suitability could not be discovered until the actual interview, which ultimately went very smoothly. Much significant data emerged from this interview and, as a result I took care to transcribe as much of the recording as I could (even though this took a number of hours to complete), remembering Dowling and Brown’s (2010, p82) advice that transcription ‘fosters greater familiarity with the interview text’.

**Interviews at the case study schools**

There were four different interviews at each case study school – with the ICT strategy leader, a subject leader focus group and two pupil focus groups (in Y7 and Y10).

As indicated above, the composition of the subject leader focus group varied by subject in each of the schools, but this did not seem to be a significant problem, since the subject area is not as relevant in this study as pedagogical approaches and school systems. The teachers and strategy leaders were welcoming and cooperative, openly sharing their views, which was most helpful. In particular, the focus group interview from case study school three was enlightening as the
systems were still relatively new to the school and I was able to probe for further information regarding implementation.

The pupil focus groups were treated similarly to the one at the research school, but of course, to these pupils, I was not familiar. This meant that I had to strive for a relaxed atmosphere, trying to get the pupils to feel comfortable in my presence as quickly as possible, following the advice of Wilson (2009, p.89), that ‘you need to establish trust and build confidence before you start’. The pupils returned quick and reasoned responses, suggesting significant familiarity with the subject matter (as I had hoped).

**Evaluation of Questionnaires**

Questionnaires were completed by staff at the research school, and by two form groups (one in Year 7 and one in Year 10) at each of the case study schools.

**Questionnaires at the research school**

The purpose of this questionnaire was to discover attitudes and current practices of a range of teachers regarding the use of ICT in their teaching. Nineteen members of staff returned the questionnaire by the deadline I had set, which was almost a full return – twenty had been issued (one member of staff had been involved in an accident and was absent from school for an indeterminate length of time). I had piloted the questionnaire with a colleague in my department before distributing it, and the feedback was that it was straightforward to complete – most questions required a simple tick response (which was designed to simplify data analysis) and I had used only one open-ended response question. I had used rating scales for numerous questions, largely because ‘they combine the opportunity for a flexible response with the ability to determine frequencies...they afford the researcher the freedom to fuse measurement with opinion, quantity and quality’ (Cohen, Manion and Morrison, 2005, p.253).
**Questionnaires at the three case study schools**

These questionnaires were designed to triangulate data from the pupil focus group interviews. They asked very similar questions to a wider sample of the same age pupils. My own children piloted the questionnaire and fed back that it was easy to complete and not confusing: this valuable information meant that I could confidently proceed using the same questionnaire for the two different year groups without the need for differentiating the wording of the questions. The questionnaires were administered during form periods in each school and were relatively straightforward to analyse. There were no anomalies to contend with, as the pupils had clearly understood what was expected of them. I was grateful for the time taken to pilot and glad to have taken Bell’s (2009, p.147) point, that ‘the purpose of a pilot exercise is to get the bugs out of the instrument: so that respondents in your main study will experience no difficulties in completing it’.

**Evaluation of Observations**

One of the ways that I was able to gain a depth of understanding regarding the topic of enquiry was to spend some time observing practice. In the main research school the purpose of this was to witness examples of the current use of ICT both within the pedagogy and by pupils. The focus in the three case study schools was on examining how the use of a learning platform had become embedded in the prevailing teaching and learning climate. OFSTED (2009, p.13) had reported seeing ‘improved motivation, interest and learning’ and, by observing pupils and teachers at work, I hoped to be able to gain my own perceptions of their attitudes, and reach an understanding regarding the efficacy of their learning platforms.

**Observations at the research school**

Three lessons were observed covering Mathematics, Science and Music. In each case I ensured that I was as unobtrusive as possible, arriving at the classroom early and agreeing procedures
with the teacher e.g. in terms of where I should sit. I was mindful of the advice given by Stake (1995, p.44) when he describes qualitative researchers as ‘non-interventionists’ and recommending that ‘during fieldwork they try not to draw attention to themselves or their work’. The pupils were used to seeing me on a regular basis anyway, and other than mild surprise to find me also in the room they soon seemed to forget about my presence and the lessons proceeded as usual. Although I was looking out for it, I did not detect any indication of the so-called ‘Hawthorne’ effect (where the observed consciously modifies its behaviour in some way because of the perceived extra scrutiny).

**Observations in the three case study schools**

The situation was slightly different here, due to the fact that I was conducting research in environments that were new to me. I was also new to the pupils, and so it was even more important that I should aim to be as blended into the environment as possible. I agreed with the schools, that before the start of each observation my presence would be acknowledged and that my purpose would be clarified as focussing on the learning platform.

One potential drawback was that I had no ability to predetermine the lessons that I would observe in each school. I had, perhaps, not been thorough enough in specifying my requirements (thereby ensuring that I was building potential for replication into the study) and with hindsight I would have been more articulate in communicating the exact events. I have been drawn back to the words of Stake (1995, p.56):

> Selection of data sources can be left too much to chance. The people who happen to be there when we happen to be there are not likely to be the best sources of data.

However, these observations were useful as they enabled me to explore the use of the learning platform in a range of different subjects and with varying group sizes. The teachers and pupils were more than willing to show me how their learning platform worked: indeed they were,
without exception, adept at explaining its various features – in each school visited. Therefore, despite my acknowledged flaw in terms of this aspect of my research design, I still managed to gain valuable data, which could then be analysed and included in the formulation of my conclusions and recommendations. I made notes about the way that the systems were accessed, the way that the user interface looked and the features that each one had, in order to determine whether there was any commonality between each school’s system. I actually gathered this data much more quickly than I had anticipated, and in retrospect a short demonstration from a teacher and a pupil would have been sufficient in each school – indeed this is what I did get in school three and it more than adequately showed me what I needed to know (and combined with the data from the other methods, was able to be triangulated).

**Evaluation of documentary evidence**

This area of the research design produced the most varied results. Firstly, there was no consistency regarding the documents that were examined, in the sense that not all respondents were required to produce the same types. Some documents were substantial, as in the Local Authority’s strategic plan whilst others were slight, and some schools offered no documentation at all. However, in the sense that I aimed to gain as informed an insight into each case as possible, I used the documents that were available to me – as Hopkins (2002, p.140) opines:

> Documents...can illuminate rationale and purpose in interesting ways. The use of such material can provide background information and understanding of issues that would otherwise not be available.

The latter view, also shared by Mertens (1998), led me to consider that I should admit the documents offered as important sources of evidence, and while it may hold true that what someone writes may not necessarily be translated into practice (Bell, 2009), a statement of intent enables an impartial view to be formed which can then be cross checked with other data gathering methods.
Summary

Overall, I felt that my research design was effective and that I conducted it in a respectful and ethical manner. By maintaining clear channels of communication with respondents I was able to ensure that I had the best chance of achieving what I set out to achieve. The results should speak for themselves, and enable any reader to form their own opinions. I considered how reliable and valid my data collection instruments would be before I began, and believe that there are aspects of the design that could be replicated in the future. I also consider that the findings from this study might be transferable or relatable from one setting to another, which satisfied me in that I was able to generate data that could provide answers to my research questions.
Results and Analysis

Considerable data were generated in this study, considering that there were multiple research instruments used in four schools and with further input from other parties. Consequently only the most relevant and telling results have been presented. It is hoped that this allows for greater synthesis and reduces the chances of anecdotal style.

Results from the research school

Analysis of interviews

There were three different interviews at the research school with:

- the assistant headteacher (AH) / ICT strategy leader
- the ICT technician
- a focus group of pupils (n=4)

A comprehensive overview of the school’s current position was gained, as well as an indication of possibilities for the future.

The Strategy Leader

The AH commented that he had a clear brief, which was to ensure that the school was ‘suitably placed to be able to move forward using ICT as a key tool for teaching and learning’. His role involved overseeing the school implementation of systems hardware and software, and attending meetings with other senior leaders from within the LA, to share best practice and discuss new pedagogical initiatives. Regarding the school’s current position, he clarified that in terms of infrastructure the school had moved forward significantly since its Estyn inspection of 2004 (Estyn, 2004) and was currently addressing issues from the Estyn inspection of 2010 (Estyn, 2010). The interview elicited progress made within the past five years as follows:

- Whole school site electrical upgrade
• Investment in whiteboards and projectors to the extent that each teaching space was equipped with both

• All teachers provided with laptop computers, with smaller ‘netbook’ computers for Physical Education staff (for more flexible access)

• Investment in computer hardware in all departments

• Introduction of electronic registration and a Management Information System (MIS)

• Email accounts for all staff, resulting in highly effective communication

• A functioning school website, with a co-ordinator appointed from within the teaching staff (to promote and develop the use of the website for teaching and learning)

This reflected an encouraging position from which to contemplate the installation of a LP. It was evident that the use of ICT has become embedded, as part of the school’s daily routine and that there has been a strategic overview of the developments required to achieve this. The National College for School Leadership, in a 2007 paper, commented on the importance of clarity of vision in taking a school forward to a place where ICT was centrally placed within the learning environment. Referring specifically to school leaders, the report said:

They want their schools to be ahead of the game. They are aware of the challenges of the future and see change as a process that makes their schools dynamic and effective. They believe that to stand still is to go backwards.

(National College for School Leadership, 2007, p.29)

The school appeared to have been effectively led to a position from which it could embrace new ICT tools such as a LP. Systems for identifying and implementing training appeared to have been given less attention, however. The AH reflected on a training event ahead of the implementation of the MIS, where the technology had failed - the opportunity for the effective delivery of the training was lost and the staff had to proceed on an uncertain basis. The training session was not rearranged. The AH did, however, comment that ‘individual staff could
identify training within their personal performance management objectives annually', adding that there was a possibility that this would not necessarily be funded.

This suggested the possibility of Perkins' (1985) 'fingertip effect' existing at the research school, i.e. assuming that by making new technology available, teachers would automatically create effective uses for teaching and learning. Yet, Sutherland, Robertson and John (2009, p.47) warn that, 'there are huge risks associated with integrating ICT in school learning, because when not used appropriately students' learning can be diminished and not augmented'. The data from this interview indicated that training for staff should, therefore, form a central part of the school's ICT strategy.

This point was acknowledged by the AH, who explained that in the next planned development (the implementation of a pupil tracking module) training for staff had been carefully considered – beginning with a small group of teachers and cascading outwards until the whole school was appropriately trained.

The ICT technician
This interview aimed to ascertain the technical support requirements for the implementation of a LP. The views of the technician were important, as the research school had only one. I believed that the implementation of a LP might streamline some of his workload, but I didn’t know that this would be the case for certain.

Some of the technician's time was consumed by ensuring that hardware was functioning correctly. Pupils occasionally came to him with access difficulties, as there was no automated system for dealing with forgotten passwords. He also dealt with the blocking of undesirable
Internet sites. Overall, however, the interview suggested that the school system was working well, and that he had good access to support from the LA if needed.

The impending implementation of the pupil tracking system brought fewer demands placed upon the technician’s time than one might imagine. It was to be provided by an external company, with much of the installation included in the contract. The technician explained that it would be ‘web-based’, with a single computer in the research school connecting to a remote server which stored the tracking system: data would be securely backed-up in another off-site location, thus minimising the chances of the unanticipated loss of important information. The technician was only required to install the school-based computer and ensure that the connections with the school’s MIS were maintained. He appeared very relaxed about this, believing that there would be few, if any, significant additional demands placed upon his workload.

BECTA’s ‘Framework for ICT Technical Support’ (2008, p.14), outlined the benefits of its implementation as:

- Improved service reliability and technical support
- Improved user confidence in the provision of services and technical support
- A change from reactive to proactive technical support
- More effective use of technical support resources

An effectively planned technical support structure would, according to this document, be important to the overall success of any new initiative. The interview revealed that there was no reference made to this framework in the research school, which suggested that its adoption was a possible target for future development especially, though not necessarily, before a LP is implemented.
The Pupil Focus Group

This comprised four pupils from Y7-Y10, and aimed to gain the pupils’ perspective of how ICT was being used to support their learning. To triangulate previous data, I began by asking how often computers were used in lessons – the school had invested in the hardware, but was it in use across the school? Was there any evidence of ‘the ‘fingertip-effect’? Apparently not: the focus group reported that ICT was used regularly in most subjects, by both staff and pupils.

The pupils identified staff use as:

- electronic registration, email and sharing information about pupil behaviour patterns (both positive and negative)
- presentation of content using whiteboards and projectors, using PowerPoint – Word, PDF (Portable Document Format) files and subject specific programs
- supporting learning with digital video footage – probing the thoughts of pupils revealed that they considered video tapes and DVD (Digital Versatile Disc) technology as being used less, as digital media libraries (such as YouTube) became more readily available (and stored more conveniently, perhaps).
- music teachers used computers to play almost all tracks for listening work

This indicated that members of staff were adaptable and open to new pedagogical approaches.

Pupils in the focus group listed their own in-school use of ICT as:

- creating digital presentations (across a range of subjects, but notably in Business Studies)
- using subject specific software (e.g. in Design & Technology, Music, Mathematics and ICT)
- using the Internet for researching
• using word processing software to aid in the preparation of coursework.

Notably, the use of email was not mentioned and when I queried this, the response was that there were no school email accounts for pupils and only one pupil had ever submitted work to a teacher using email. This seemed to be an obvious weakness in the school’s provision of ICT, and an anomaly given that staff had access to this feature. However, the pupils confirmed that they had a secure area for storing their work on the school’s intranet, and that they had also used portable storage media to take work to and from school.

Regarding assessment, I was curious as to whether ICT was being used to give instant personalised feedback. One pupil had experienced completing a test using ICT, but this was an isolated instance in a lesson delivered by a trainee teacher who had booked an ICT room. There was a very quiet reaction when asked if teachers marked work with ICT and I noted some puzzled expressions (which I made a note of, remembering Cohen, Manion and Morrison’s (2005, p.282) view that ‘different kinds of data’ should be recorded). The use of the mark-up feature in word processing programs, and other features that allow comments to be added, were, it appeared, unfamiliar to the pupils.

To begin to discover how, if at all, ICT was being used from outside the school, I asked the pupils about the school website, which encouragingly only one of the four pupils had not visited. I wanted to know why the three others had visited: other than general inquisitiveness, the reasons given included ‘to check if the school was closed in the snow’, to look at information and work that had been uploaded by their teacher (two of the four pupils) and to view news articles in which they featured (two pupils). It was certainly encouraging that some teachers were using the website as a vehicle for enhancing learning, and although it initially seemed that instances of this were few and far between, the pupils noted that there had been an
increasing trend over the past year (with resources being made available in Science, Welsh Baccalaureate Qualification, Business studies, ICT, French and Music). The increase in use over recent months indicated that the school website had been identified as a tool for contributing to teaching and learning, which would indicate that it could be paving the way for a more structured approach, i.e. using a LP.

The two pupils from KS4 were asked if they had used the website to inform their options process: neither had, although they said that they were aware that they could have, but felt sufficiently comfortable with the choices they had made and wouldn’t have been persuaded otherwise. None of the pupils had listened to an educational podcast either, but they thought that it seemed like a good way to strengthen their understanding – one of the pupils commented on the possible usefulness of this in the case of pupils who had been absent from school, or missed parts of lessons due to peripatetic support.

Considering the future, the pupils felt that there was much potential for using ICT to support teaching and learning, feeling that the possibility of being able to access school licensed software remotely (having been asked about this) would be a very powerful and positive benefit – particularly with some of the more expensive subject specific packages (although they expressed surprise to learn of this feature). They also felt that they should have school email accounts, and that they would benefit if they could use their mobile phones and iPads (an iPad being a tablet computing device) to connect to the school wireless networks which were identified on their devices. Significantly, the use of the latter technologies were referred to as two of the most important emerging tools for engaging learners by Johnson and Adams (2011, p.1) – whilst mobile phone technology was regarded as having global significance, tablet computing was seen as particularly relevant to the United Kingdom market, with ‘time-to-
adoption’ indicated as ‘one year or less’. It seemed that these pupils were clearly in touch with the way that learning with ICT might best develop in the near future.

Teaching Staff Questionnaire

This questionnaire was designed to uncover teachers (n=19) collective relationship with ICT as a tool for teaching and learning, to discover the extent of their understanding regarding LPs and to identify any training needs.

Only five of the nineteen (26%) had heard of the term ‘learning platform’ and knew what one was, whilst six others (32%) had heard the term but did not really understand it. Eight (42%) had never heard the term and, consequently, had no understanding of the concept of a learning platform.

However, all nineteen said that they used ICT in their teaching, and thirteen (68%) said that they had used ICT when creating lesson plans (four (21%) used ICT regularly, but not always, for this purpose). These figures indicated that the teachers were embracing ICT as an important part of their working practice, and furthermore, when asked how often they used ICT in their teaching the following data was returned:

![Bar chart showing the frequency of teacher ICT use in their lessons, at the research school (n=19)](image)

Fig. 1 – The frequency of teacher ICT use in their lessons, at the research school (n=19)
The fact that 77% used ICT in their teaching regularly suggested that concept of a learning platform might be welcomed. However, the data also indicated scope for improvement, as it would be desirable to convert the 68% Moderately/Quite Frequently group to become daily users. Knowing that the technology was being used was only one perspective, however. I wanted to know more about how they were using the technology.

The questionnaire offered a number of options and the respondents were asked to tick all that applied to them, as well as giving them an option to add their own (none did this). The results were as follows:

<table>
<thead>
<tr>
<th>Table 2 – Uses of ICT by teachers at the research school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation of learning e.g. PowerPoint</td>
</tr>
<tr>
<td>Websites used</td>
</tr>
<tr>
<td>Interactive Whiteboard</td>
</tr>
<tr>
<td>Playing video clips</td>
</tr>
<tr>
<td>Playing audio clips / podcasts</td>
</tr>
<tr>
<td>Creating your own podcasts or films</td>
</tr>
<tr>
<td>Setting automatically marked tests</td>
</tr>
<tr>
<td>Pupil use of subject specific software</td>
</tr>
<tr>
<td>Storage of marks (i.e. as an e-markbook)</td>
</tr>
</tbody>
</table>

Table 2 predominantly shows ICT as being used administratively or as a presentation tool, returning figures of ten (53%) teachers or above. Resource uploading to the website was indicated by just five teachers (26%) and the use of subject specific software and video clips indicated four times (21%). The fact that other uses of technology were present in lower frequencies indicated that the research school would need to shift the perspective of ICT as a tool for teaching into one for learning in order to adopt a LP. There are echoes here, of Sutherland, Robertson and John’s (2009, p.4) report that ‘on average only two in six secondary
school subject departments make effective use of ICT; the remaining four use ICT little if at all.'

Observation of lessons

In the three lessons observed, ICT was used to take the attendance register, and also as a presentation tool, which concurs with findings mentioned above.

During a KS4 science lesson, pupils watched a video that had been embedded within a presentation: the use of video seemed to appeal to the learners as it illustrated the key learning objective of the lesson (the scientific aspects of global warming). This lesson could very easily have been stored within a learning platform as a resource for other colleagues to use. Moreover, pupils could access the video again and again, from wherever was convenient – it would become part of their resource bank and not just the teacher’s.

In both the mathematics and the music lesson, the use of ICT required a response from the learners. In music, rhythm grids were displayed (and an audio backing track played) for pupils to clap along to – the teacher was able to observe the class (where again, the level of engagement – and enjoyment – was perceived to be high) to monitor success rates and provide support where necessary. If included in a LP as an accessible resource for pupils, it could enhance learning as a regular practice aid. The mathematics lesson featured a space-invaders style game, which was a high-energy part of the lesson and fully engaged the learners (as a ‘drill’ tool this could also prove motivational and beneficial to the learners). The use of gaming technology in learning was recently identified as another key educational technology in the 2011 Horizon Report where it was noted that ‘game-based learning has grown in recent years as research continues to demonstrate its effectiveness for learning for students of all ages.’ (Johnson et al., 2011, p.5).
The evidence suggested that the research school certainly had valuable and varied uses for ICT within its delivery of lessons, which could easily contribute to a LP (software license permitting). The lessons were not special, but part of the routine practice of the teachers observed.

**Results from the case study schools**

**Interviews with strategy leaders**

OFSTED (2009, p.20) remarked that in all of the schools with LPs they had visited:

> there was a senior or middle manager with formal responsibility for the VLE. However, their contributions ranged from just a general understanding that a VLE might be helpful to an institution, to a competent and well articulated role in improving the...VLE’

The strategy leaders here fell into both camps. In school A, the strategy leader was passionate about the LP (the development of which formed the main part of his job description) and regularly wrote articles and spoke about his experiences. In school B the main driver of the LP was the headteacher, but the strategy leader was one of his leadership team, and a similar case was found in school C, where the AH had been charged with the responsibility of the LP with little background in the field but supported by an experienced network manager. Significant details emerging from the interviews were as follows:

**School A**

The idea for a LP was brought to the school by one of its ICT technicians. It was based on a common technology that is developable by individual organisations and the LP at this school was not provided by a commercial organisation. As such, it evolved over time and has now become very significant to the school.

**School B**

The headteacher had brought the LP to the school, and it was a commercially available system. Implementation had been rapid, with all staff expected to use it immediately – introductory training had
been provided (which was encouraging). The LP had proven to be a useful tool which pupils readily adopted, however, staff adoption was more problematic and it was recognised that there were inconsistencies across departments (this was also noted by the pupils). Recently there had been some difficulties with the system ‘crashing’ and these reliability issues, together with chequered use had led to a review, which concluded that the school might not be obtaining best value for money. The school had decided not to renew its contract but instead to look at developing its own LP.

The LP was very new to the school. It was provided by a smaller scale commercial company (i.e. not one of the major providers) but the school had been pleased with the launch and early adoption. All staff and most of the pupils were using the system, which provided the opportunity for teachers to send messages, plan lessons, book resources and store files. This learning platform did not have an integrated pupil tracking system, but the strategy leader felt that this would be desirable. She also noted that the parent portal was not functioning yet, but that much of the planning for it was in place – parents were requesting access and this would be the next stage of development.

**Interviews with subject leaders**

The subject leaders were generally positive about this technology. Those in school A gave the impression of being most involved – possibly because this school was the longest user, and perhaps because it is led with passion and the support of a dedicated team of software
developers. I had to remember that this was unusual, in that most schools (particularly the research school) would not have access to this level of support.

The most significant comment from the staff in school A was that, as a teacher, resources could be accessed within very few clicks of a mouse. They felt that the reliability of their system was a great strength and that they had access to support and training whenever it was required. Other interesting points from the subject leaders in school A included that the LP team had developed an audio visual resource which was also very easy to use. These teachers were in no doubt that their LP was enhancing the education of their pupils, who they said used the system routinely.

The teachers in school B were slightly less positive, which seemed to be because of the unreliability of the system (they said that they needed to have complete faith in the technology) which reflects the DfES (2005) point that teaching staff needed to be confident with the technology. However, they also commented that there were good features in their LP, such as the ability to use one access point to obtain all of the tools that they would need for their lessons. They all said that they used the system and that pupils submitted work and communicated via email. However, they felt uncertain about the future because they were aware that the contract with the LP company was coming to an end at the end of the academic year. I wondered about the efficacy of the strategic leadership at this point, but concluded that there are efficient ways of achieving similar outcomes using technology without the need for an expensive commercial system.

In school C, the teachers were effusive about their new LP. They had used various systems in the past, including open-source software that had limited scope for development amongst teachers with limited ICT expertise, but they felt that their current system was user-friendly and had very positive functions. There had been a brief initial training session for all staff at the
introduction, from which some ‘champions’ had emerged, who were subsequently able to buddy any other teachers requiring additional support. Staff adoption of the system was high, they felt, but perhaps not all departments were exploiting the benefits of the system yet. There were features that they all liked – such as the ability to book rooms easily, set recurring notices to any pupil or group of pupils, the ability to upload resources from home (which was particularly useful during teacher absence, as work could be set which pupils could access), and controls for the Internet (the ability to turn pupil access on and off).

The subject leaders gave insights into how the systems worked on a day-to-day basis for them. There were some useful considerations for the research school – i.e. would the ‘champion’ model be an efficient way to deliver training? Could the system be as flexible as those witnessed, and importantly would the school be best advised to look at commercial solutions or develop its own based on the model that school A developed?

**Interviews with pupils in Y7 and Y10**

It should be said at this point, that much of the data returned in the pupil focus group interviews was corroborated by the pupil questionnaires. The smaller number of pupils in the focus group enabled some responses to be probed, but there was generally little need for this.

I found the responses from the pupils in school C the most enlightening, as the LP was implemented midway through the last academic year, and so it was still fresh in their minds. The pupils were very positive about the system, highlighting features such as a ‘drop box’ where they could upload files, e.g. to teachers to submit homework. They also liked the fact that the layout of their home page could be customised. I learned that they had been introduced to the system in a lesson that had been delivered at the same time to all pupils, though the pupils felt that at that time not all of the teachers seemed to understand it fully (which might
have meant different experiences for different pupils). One Y7 boy also said that there were still some aspects with which he felt unclear, and would like to have further training on. This suggested the need for a formal feedback system, which was not yet in place: I was coming to understand that to retain an open dialogue would be a valuable feature of the ongoing embedding of any LP.

**Analysis of questionnaires**

In total, 148 pupils from Years 7 and 10 across the three schools completed the same questionnaire and comparative quantitative data were gathered. There were some differences, both across and within schools, but ultimately the data seemed overwhelmingly in support of a learning platform as a tool to support learning. Almost all of the pupils said that they used the learning platform (99%) – in fact, only in School B Y10 pupils was there a lower than 100% return, where just two of the twenty four pupils questioned returned a negative response. In terms of the frequency of use, overall 64.5% of pupils said that they used the learning platform almost every day, whilst 91.5% claimed to use it once or twice per week. There were notable variations from school to school:

![Percentage of pupils using their learning platform every week](image)

*Fig. 2 – Percentage of pupils using their LP every week*
The data suggested that LP use was more encouraged in schools A and C where more pupils used the tool every day. Even so, with 81% of pupils in School B accessing at least every week the overall picture there was still positive. Furthermore, 94.5% of the pupils said that their use of the learning platform had increased over time (4.5% felt it had remained the same and only 1% said that they thought their use had decreased over time). This clearly suggested that there were considerable merits attributed to the use of the LP by the schools.

The pupils were asked how they used their LP, and the combined data from all respondents is shown in the table below:

<table>
<thead>
<tr>
<th>Pupil uses of their LP</th>
<th>Percentage of all pupils questioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload files</td>
<td>79%</td>
</tr>
<tr>
<td>Download files</td>
<td>85%</td>
</tr>
<tr>
<td>Complete work in class</td>
<td>95.50%</td>
</tr>
<tr>
<td>Take tests</td>
<td>70%</td>
</tr>
<tr>
<td>Watch video links</td>
<td>33%</td>
</tr>
<tr>
<td>Listen to podcasts</td>
<td>31%</td>
</tr>
<tr>
<td>Instant messenger / chat</td>
<td>0%</td>
</tr>
<tr>
<td>Contribute to discussion forum</td>
<td>23.50%</td>
</tr>
<tr>
<td>Submit work</td>
<td>77.50%</td>
</tr>
<tr>
<td>Email teachers</td>
<td>63%</td>
</tr>
<tr>
<td>Email classmates</td>
<td>88%</td>
</tr>
<tr>
<td>Access work away from school</td>
<td>72.50%</td>
</tr>
</tbody>
</table>

Fig. 3 Pupil uses of their LP

These data (representing all 148 pupils) showed that most pupils regularly engaged with their LP in an interactive way, and represented a marked contrast to the research school. There were, however, differences between schools as one might expect – e.g. School A was the strongest user of audio visual files, with 71.5% of its pupils accessing either video files or podcasts, compared with 16% in school C (all of whom were in Y10 and accessed podcasts), although
this school was a recent adopter of LP technology. Most notably, the Instant Messenger / Chat function was not used at all.

The remote learning aspect of LPs was clearly a feature across the three schools, concurring with Holmes and Gardner’s (2006, p.31) comment that ‘as physical limitations on access to information are removed, learning is increasingly taking place in locations selected by learners and at a time that suits their needs.’ 87.5% of LP users across all three schools accessed it from their homes, 21% at friends’ homes, 13% at a public library and 45% via another method, such as mobile phone technology or tablet computers such as an iPad.

Another common thread that emerged from analysis of the pupil questionnaires was that 98.5% of the pupils trusted their LP, regarding it as very secure. In schools A and B pupils were required to complete a user agreement, but in school C they were not. This might have been because School C was a very recent implementer of LP technology, although one would have hoped that an acceptable use agreement might be adopted in the near future. Similarly, school C was the only one not to offer functioning parental access to the system.

In terms of suggesting improvements to their LPs, there was a formal procedure in school A, where an area of the LP was dedicated to pupils being able to comment on its functions and appearance. A minority of pupils in schools B (6%) and C (20%) felt that they were able to make suggestions for improvement, though these were via informal methods.

Generally, the pupils were happy with their LP, with 90% liking its appearance. However, 42% of the Y10 pupils in school B commented that their system sometimes crashed, and 39% of all pupils would like to see the social networking aspect of their LP developed further (through the use of discussion threads, and chat areas). Most significantly, none of the pupils felt that the LP had a negative impact upon their learning, whilst 85.5% felt that it had a positive impact on their learning. This was data that the research school should heed.
Analysis of documentation

Substantial documentation was offered from school A, in the form of a detailed account of its progress to date. School B offered no documentation, and School C provided a leaflet that had been designed for parents, which was most useful.

School A

The document began by stating the background of the school; particularly impressive was that it ‘works with over 400 schools internationally to support the development of their Learning Platforms’ (School A, 2010, p.3). The document served as a detailed guide to the potential uses of a LP, and also offered insights into reasons for its success. Points illustrated included staff and student gateways, subject sites, and creating websites using their technology, parental engagement, student voice, and features such as online mentoring, online options, and individual customisation. Clearly the leadership and vision at this school was incredibly strong and its current position is some considerable distance from both other case study schools, and of course the research school itself. School A claimed that central to its success, has been ‘the constant feedback from staff and parents but, most importantly, the students.’ (School A, 2010, p.41). However, one must not overlook the strength of the school’s development team, and the fact that it was positioned to respond to the suggestions it received almost immediately.

School C

This was a much simpler document than that of school A, presented as a four sided A5 pamphlet. It gave clear information to parents about what their LP could offer, and it notes ‘this is an online web service that you can gain access to from your home computer or mobile telephone’ – suggesting that it is in touch with the most recent developments in hardware. The
school explained that parents could access their child’s timetable, attendance record and school notices. A set of easily understandable instructions, with coloured images, showed how parents could access the system. Unfortunately, it seems from the data above, that this system is not yet functioning but will make further progress with this as the year goes on. Nonetheless, the document would be very useful at a time when the research school might launch its LP.

**Results from the LA**

**Analysis of interview with LA officer**

This was a very important interview, as it provided insights into new developments within the LA. From December 2010, the LA’s strategy document was overtaken by a new ‘integration of digital learning project’. I would have spent time analysing the strategy document, but if it had been superseded there seemed to be little point. The officer explained that this was to be a £40,000,000 project 70% funded by the Welsh Assembly Government and 30% funded by two Local authorities. Every 14-16 learner would be provided with a laptop computer, schools would get up to sixty wireless access points, and a 1Gb Internet connection. He continued, explaining that this meant that ‘if you’re trying to stream lots of digital media you’ll be able to do so without slowing the network down – the end user experience will be really, really strong’. Together with this the LA would launch a LP, a specification for which has been written and for which commercial developers had been invited to tender. The final decision about which company to use would be taken by a mixture of LA staff, teachers and pupils, based on what the panel believed to offer the best experience. However, the project is funded for 14-16, and therefore the LP will be targeted at KS4. When I asked if it would be extended, it was felt that ‘it may be that we do some redevelopment to make it ....more intuitive, user friendly, attractive [to KS3 pupils]’.
The LA had considered the issue of staff training too, explaining that initially core subjects (English, Maths and Science) would be targeted, and then cascaded to other subjects: two teachers from each department would be funded to form a Professional Learning Community (PLC) with four days to ‘share…understanding of what the new pedagogy is’, and eventually the PLCs were to become self-sustaining through on-line collaboration. The aim was that within the next three years, ‘we expect every teacher to be contributing resources.’ One of the points that the officer emphasised was that there was a link to the over-arching school improvement strategy – he commented that ‘it’s about good teaching and learning, it’s not about the technology’. However, he was keen to emphasise that the system would embrace new technologies, particularly for access, and for engaging parents – ‘the key thing is [he pauses] any device: Android phone, iPad, laptop’. He was keen to underline that they don’t intend to leave anyone out – ‘we do need to make sure that, through the system that we operate, every child can access something in some way’.

Conclusions

Research Question 1 sought to discover features of e-learning currently operational at the research school. The data suggested that the school is actually well placed regarding this. It operates a Management Information System through which it executes electronic registration, it has a functioning website where some departments are beginning to upload files for pupils to access remotely, and staff use the system for administrative purposes such as behaviour management and email. Furthermore, there is a growing trend for innovative teaching using ICT and multimedia / interactive tools. Pupils have access to secure online storage, but as yet no email accounts. A new pupil tracking system is about to be implemented and this has been brought about by the vision of the ICT strategy in response to an Estyn (2010) inspection report finding. Holmes and Gardner (2006, p.32) emphasise that:
There is... a clear need for leadership from school managers to espouse and promote the view that e-learning can considerably enhance learning for their students.

The leadership certainly seems to have emerged since the 2004 inspection (Estyn, 2004) and is suitably placed to move the school forward further.

Research Question 2 was concerned with what was required by the research school in terms of a LP. Was one actually required? It seemed that many of the key features were already present, as indicated above. However, the centralisation aspect that a LP can offer is not yet in place. The LA wants the school to have a system where resources for teaching and learning can be shared – not just in school, but across the LA. The pupils want improved communication, through pupil email accounts, and they also want to be able to access the LP through their mobile devices.

Research Question 3 sought to reveal features of successful LPs in order to inform the research school of its best way forward. Having considered the systems viewed in the case study schools, it was apparent that the colourful interface of all of them (‘cool, doesn’t look old fashioned’, as one Y7 pupil put it) is missing at the research school. It would seem that this interface is of considerable importance to the learners. Moreover, the case study schools’ systems displayed the benefits of everything being quickly available from one simple log-in screen. They spoke of the usefulness of being able to confirm their homework tasks, as their teacher had posted them to their ‘area’. The potential for parental engagement was evident, as was that of personalising learning. In fact, as Armstrong, Hawkins and Whitley (2010, p.9) comment, these and other practices should be part of the ICT services that a school provides:

the personalising of learning, the harnessing of technologies to enhance learning opportunity and effectiveness, the eliciting and integration of student voice, and the widening of home access and support. To this end, schools are encouraged to implement e-learning practices, including approaches that use learning platforms.
Recommendations

Having considered the mass of data that this study generated, together with the understanding gained from the review of literature, there is no doubt in my mind that the research school should make progress towards the implementation of a LP. It seems sensible, however, at this time, to wait to see what the LA 14-16 initiative, due for piloting in January 2012, will bring. I have been asked to be a part of the procurement panel for the project, and hope to be able to offer the benefit of the experiences gained in this study.

In the meantime, the research school should move steadily to adopt its new pupil tracking system (ensuring that staff are successfully, appropriately and adequately trained).

I would also recommend adding an email account to every child’s user area. It should not be too onerous a task for the technical team and the pupils would value the opportunity to enhance their e-communication with staff. Finally, teaching staff should be encouraged to begin uploading more resources, led by change ‘champions’, to engage pupils with e-learning that can be accessed any time, from anywhere.
References


BECTA (2008a) *Getting Started With Your Learning Platform*. Coventry: BECTA


BECTA (2008f) *What the Research says about Virtual Learning Environments in teaching and learning*. Coventry: BECTA

BECTA (2008g) *Learning Platforms in Action*. Coventry: BECTA


Research Timetable

April 2011

- Review and complete Milestones 1 and 2, taking into account any recent literature that informs and enhances this enquiry
- On-going reading and internet trawls

May 2011

- Revision and completion of Milestone 3
- Discuss research design and Methodology with Tutor in order for data collection to begin
- Interview SLT member with responsibility for the oversight of whole school ICT development
- Interview ICT technician to determine current status of hardware and software systems
- Meeting with LA ICT staff to discuss the current status and proposed future direction that the school and LEA would like to achieve.
- Letters requesting permission to visit other schools written and sent, together with a number of the research participant voluntary informed consent proforma and headteacher voluntary informed consent proforma.
- Ongoing reading of relevant literature
- Design and administer questionnaires to pupils regarding what they believe they would require of a LP
- Design questionnaires for case study schools
- Design questionnaires for staff in the research school: focus, for example, on what they know of Learning Platforms, how they might use one, to what extent they feel the introduction of one would be beneficial.
• Watch and analyse BECTA DVD ‘Learning Platforms in Action’

• Ongoing reading of literature / completion of Review of Literature

June 2011

• Visits to other schools

• Administer questionnaires

• Begin to analyse and reflect on data gained thus far

• Assess progress made in school on a practical level and ascertain what needs to be done in the future

• On-going reading of relevant literature

• Evaluate methodology, reflecting on changes that might have been made, problems encountered

• Make a point of considering the extent that data collected remains reliable and valid – how have I triangulated?

• Plan presentation of results, ensuring that this refers back to the research questions

• Draw draft conclusions and recommendations

• Prepare Milestone Four
July – August 2011

- Reflect on current status of research
- Amend and adjust as necessary
- Is there any new literature available that might further illuminate the study

September 2011

- Prepare Milestone 5 – Title and Abstract and refer to writing up advice in dissertation handbook.
- Check that the final report is coherent and linked to a clear line of thought / argument. Is it comprehensive and valuable on a practical level?
- Prepare final submission, ensuring that format is correct
Appendix II
Interview prompt questions for pupils at Research School

1. How often are computers used in lessons?
2. How are computers used?
3. Do you have an area where all of your ICT work is securely stored?
4. Have you completed tests using ICT in school?
5. Have teachers marked your work using ICT?
6. Have tests ever been marked instantly by a computer?
7. Have you visited the school website?
8. (If Yes) – Why did you visit the school website?
9. How often, do you use ICT from outside of school to connect to the school website?
10. (To pupils in KS4) – Did you use the school website to research your option choices?
11. Have you ever used the school website to access work?
12. Have you ever submitted work using email?
13. Have you participated in any school-organised web forums?
14. Have you used a chat room or online discussion to discuss your school work? If ‘yes’, has this been set up by your teacher?
15. Have you ever used ICT to listen to an educational podcast?
Interview – pupils

1. Which year are you in?
2. Do you use the school learning platform?
3. How often do you use it?
4. Would you say that your use of the LP has increased over time, decreased over time or remained about the same over time?
5. Think about the different ways that you can use the LP. Can you describe some of them to me?
   a. Follow up
6. How were you first introduced to the LP?
7. How secure do you feel it is?
8. Do you have to sign a user agreement or contract?
9. Where do you usually access the LP? (home /school / public library / other)
10. Do your parents have access to the LP?
11. Do they use it?
   a. Why do they use it
   b. How do they use it
   c. What are the advantages / disadvantages of them using it?
   d. Do they discuss the learning platform with you?
12. Do you like the way your LP /Website look?
13. What are the strengths of your LP?
14. Are there any other features you would like to see in your LP?
15. Do you complete homework online?
16. Do you feel that all subjects use the LP equally?
   a. Are some subject departments particularly strong users?
   b. Are there features from any departmental area that you would like to see used in other departments?
17. Is there a way for you to share your views about the LP?
18. Have you ever made a suggestion for an improvement?
19. Is there anything that you particularly don’t like about the LP?
20. Overall, do you feel that the LP has a positive impact on your learning, a negative impact…or neither a positive or negative impact?
Interview
Leader ICT strategy

I. Have you been involved since inception of learning platform?
   A. Who brought the idea of a learning platform to the school?
      1. How was the idea progressed?
         a. Over what time scale was initial planning of the LP?
      2. Were there any initial obstacles to overcome in order to establish the LP?
         a. Have you experienced user reluctance?

II. How did you initially bring parents on board?
   A. Have you needed strategies to ensure that they remained engaged?
      1. If so, what kind of strategies have been employed?
   B. What percentage of parents currently use the LP?
      1. If there are parents that do not use the LP, have you aimed to discover why?
         a. What reasons, if any, have you discovered?
         b. Have you planned to counter this?
   C. Have parents made any comments about the LP?

III. How is the learning platform introduced to pupils?
    A. Is there any support available for pupil users?
    B. Is pupil use monitored

IV. Are school governors involved with the learning platform?
    A. Do they have their own area on the LP?
       1. How do they use the LP?

V. In your experience what are the financial implications of running a school LP?
   A. Is the LP funded directly from the school budget?

VI. How do you organise the management of the LP?
    A. Is there a LP management team?
    B. Who ensures that the learning Platform is updated?
       1. How often is the LP updated?
          a. How is data backed up?

VII. How was the ideas of a LP introduced to staff?
    A. Do all departments use the LP equally effectively?
       1. Can you give some examples of how the LP is used by teachers?
Appendix III
E-learning Questionnaire - Pupils

1. Which year are you in? (please tick)

   Year 7
   Year 10

2. Do you use the school Learning Platform (you may know this as the Pupil Gateway or the Pupil Portal)? If you answer 'Yes' go to Q.3. If you answer 'No' go to Q10.

   Yes
   No

3. How often do you use it?

<table>
<thead>
<tr>
<th>Almost every day</th>
<th>Once per week</th>
<th>A few times per fortnight</th>
<th>Occasionally during a term</th>
</tr>
</thead>
</table>

4. Would you say that your use of the learning platform has increased over time, decreased over time or remained about the same over time?

<table>
<thead>
<tr>
<th>Increased</th>
<th>Remained The Same</th>
<th>Decreased</th>
</tr>
</thead>
</table>

5. Look at the following list, and tick any statements that reflect how you use the learning platform.

<table>
<thead>
<tr>
<th>Access work away from school</th>
<th>Listen to podcasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email classmates</td>
<td>Watch video links</td>
</tr>
<tr>
<td>Email teachers</td>
<td>Take tests / assessments</td>
</tr>
<tr>
<td>Submit homework / coursework</td>
<td>Complete work in class</td>
</tr>
<tr>
<td>Contribute to discussion forum</td>
<td>Download files</td>
</tr>
<tr>
<td>Instant message / chat</td>
<td>Upload files</td>
</tr>
<tr>
<td>Other - please describe:</td>
<td></td>
</tr>
</tbody>
</table>

..........................................................................................................................................................................

..........................................................................................................................................................................

78
6. How were you first introduced to the learning platform?

<table>
<thead>
<tr>
<th>In an assembly</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In a lesson</td>
<td></td>
</tr>
<tr>
<td>Using a leaflet / instruction guide</td>
<td></td>
</tr>
<tr>
<td>Other - please explain below</td>
<td></td>
</tr>
</tbody>
</table>

7. How secure do you feel your learning platform is? (please tick)

<table>
<thead>
<tr>
<th>very secure</th>
<th>quite secure</th>
<th>not secure</th>
</tr>
</thead>
</table>

8. Do you have to sign a user agreement or contract? (please tick)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

9. Where do you access the learning platform? (please tick all that apply)

<table>
<thead>
<tr>
<th>School</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td></td>
</tr>
<tr>
<td>Friend’s house</td>
<td></td>
</tr>
<tr>
<td>Public library</td>
<td></td>
</tr>
<tr>
<td>Other (please explain below)</td>
<td></td>
</tr>
</tbody>
</table>

10. Do your parents have access to the learning platform?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

11. Only answer this if you answered 'Yes' to Q.10 (otherwise go to Q.13)

<table>
<thead>
<tr>
<th>Do your parents use the learning platform?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

79
12. Only answer this if you answered 'Yes' to Q.10 - how can your parents use the learning platform? (please tick all that apply)

<table>
<thead>
<tr>
<th>Option</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To look at my attendance</td>
<td></td>
</tr>
<tr>
<td>To check on my behaviour</td>
<td></td>
</tr>
<tr>
<td>To look at my marks and grades</td>
<td></td>
</tr>
<tr>
<td>To check if my work is on track to meet my targets</td>
<td></td>
</tr>
<tr>
<td>To look at work we have completed in class</td>
<td></td>
</tr>
<tr>
<td>To listen to podcasts</td>
<td></td>
</tr>
<tr>
<td>To look at video resources</td>
<td></td>
</tr>
<tr>
<td>Other (please explain below)</td>
<td></td>
</tr>
</tbody>
</table>

Other: ...................................................................................................................................................
.......................................................................................................................................................
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13. Do you like the way that your learning platform looks?

   Yes [ ]
   No  [ ]

14. Are there any other features you would like to see in your learning platform? (please tick)

   Yes [ ]
   No  [ ]

If you answered 'Yes' please explain further here:
.......................................................................................................................................................
.......................................................................................................................................................
.......................................................................................................................................................

15. Do all subjects use the learning platform?

   Yes [ ]
   No  [ ]

16. Are some subject departments particularly strong users of the learning platform? (please list any, below)
.......................................................................................................................................................
.......................................................................................................................................................
.......................................................................................................................................................

80
17. Is there a way for you to share your views about the learning platform?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

If you answer 'Yes', please explain how this is done:

........................................................................................................................................
........................................................................................................................................

18. Have you ever made a suggestion for an improvement to be made?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

If you answer 'Yes', please explain what the suggestion was:

........................................................................................................................................
........................................................................................................................................

19. Is there anything that you particularly don't like about your school's learning platform?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

If you answer 'Yes', please say what it is that you don't like:

........................................................................................................................................
........................................................................................................................................

20. Overall, do you feel that the learning platform has a positive impact on your learning, a negative impact on your learning or neither a positive nor negative impact on your learning?

<table>
<thead>
<tr>
<th>Impact</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive impact</td>
<td></td>
</tr>
<tr>
<td>Neither positive nor negative impact</td>
<td></td>
</tr>
<tr>
<td>Negative impact</td>
<td></td>
</tr>
</tbody>
</table>
E-Learning Questionnaire – Teachers at Research School

1. Please state which subject you mainly teach.

2. Have you heard of the term ‘Learning Platform’?
   - Yes
   - No

3. Do you know what is meant by the term ‘Learning Platform’? (please tick)
   - Yes
   - No

4. Do you use ICT when creating lesson plans?
   
<table>
<thead>
<tr>
<th>Always</th>
<th>Regularly</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
</table>

5. Do you use ICT in your teaching? (If you answer ‘Yes’ go to question 5. If you answer ‘no’ go to question 11.)
   - Yes
   - No

6. How often do you use ICT in your teaching – do not include registration of pupils? (please tick)
   
<table>
<thead>
<tr>
<th>Not at all</th>
<th>Rarely (once or twice per term)</th>
<th>Moderately (twice or three times per fortnight)</th>
<th>Quite Frequently (twice or three times per week)</th>
<th>Very Frequently (daily)</th>
</tr>
</thead>
</table>

7. How do you use ICT in your teaching? (Please tick all that apply)

<table>
<thead>
<tr>
<th>Presentation of learning e.g. PowerPoint</th>
<th>Resources uploaded to website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Websites used</td>
<td>Blog written</td>
</tr>
<tr>
<td>Interactive Whiteboard</td>
<td>Twitter feed into web page</td>
</tr>
<tr>
<td>Playing video clips</td>
<td>Online Discussion Groups</td>
</tr>
<tr>
<td>Playing audio clips / podcasts</td>
<td>Email communication with staff</td>
</tr>
<tr>
<td>Creating your own podcasts or films</td>
<td>Email communication with pupils</td>
</tr>
<tr>
<td>Setting automatically marked tests</td>
<td>Email communication with parents</td>
</tr>
<tr>
<td>Pupil use of subject specific software</td>
<td>Receipt of work from pupils</td>
</tr>
<tr>
<td>Storage of marks (i.e. as an e-markbook)</td>
<td>Video Conferencing</td>
</tr>
</tbody>
</table>

Other – please state ........................................................................................................

83
8. Do you change between applications during a lesson, e.g. SIMS ➔ a website ➔ PowerPoint ➔ subject specific software? (please tick)

<table>
<thead>
<tr>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
</table>

9. If you answered positively to Q.8, please answer the following (otherwise move to Q.10):

Describe your most common experience of changing between applications: (please tick)

<table>
<thead>
<tr>
<th>Non-problematic</th>
<th>Neutral</th>
<th>Problematic</th>
</tr>
</thead>
</table>

10. Do you require pupils to store work on the school intranet?

Yes
No

11. Do you think enabling pupils to have school email accounts that they could access from outside of the school would be... (please tick)

very useful | Useful | not useful

12. Do you think that enabling pupils to securely access their school ICT account (including access to their 'my documents' folder and school licensed software) from outside of the school would be... (please tick)

very useful | Useful | not useful

13. How easily would you say you learned how to do new things using ICT? (please tick)

Very easily | Quite easily | Not very easily | Not at all easily

14. If the school introduced a new ICT-based aid to teaching and learning, indicate the methods of training that you would find useful. (please tick all that apply)

- Whole school presentation using large screen and projector
- Large group training with individual access to the new aid
- Small group training with individual access to the new aid
- Printed notes and screenshots with step-by-step instructions
- An automated online tutorial
- Video tutorial
- Being allocated a personal mentor
15. Do you have anything else that you would like to share regarding the use of ICT in your teaching?
Appendix V
Dear,

My name is Andrew Protherough Jones and I am a final year student at the University of Wales Institute Cardiff, reading for MA in Education Leadership and Management. I am also a Head of Department at an 11-16 school in South Wales.

I am writing to inquire if you would be able to assist me with research for my dissertation. The research topic concerns learning platforms and the title of the paper is:

**E-learning for the secondary school: seeking the most appropriate solution.**

I hope to use the research findings to help my school determine its way forward in introducing a learning platform and am writing this letter to seek your permission to use your school as a focus for my research. I have selected your school because of its acknowledged, significant contribution to developments in this field.

To help clarify my aims, the key questions that I need to answer are as follows:

1. To what extent are features of e-learning currently operational at the research school? (i.e. my own school)
2. What is required of a Learning Platform at the research school, from the perspectives of teachers, pupils, and the Local Authority?
3. What does an examination of three other schools, who have received acclaim for their Learning Platforms, reveal about their successful design and implementation?

Therefore, in order to answer question 3 in particular, I would like to include participants from your school to conduct my research using the following methods, if possible:

- Interview the leader of your ICT strategy
- Interview a small number of pupils from years 7 and 10 in groups
- Questionnaire one Year 7 and one Year 10 form
- Interview four Heads of Departments
- View your whole school ICT policy documentation or similar.
- Observation of the use of your learning platform.

I am fully aware of the ethical guidelines as set out by the British Educational Research Association and consequently can assure you that your school, its staff and its pupils will not be named in my final report. I will, at all stages, be totally open and honest. The final research report will be submitted to the university for assessment purposes and a copy of it may be kept in the university library. I will make a copy available for your school willingly, should you so wish.
However, I realise that I cannot successfully complete this research without the consent of the Headteachers of the schools I hope to involve. It is therefore important that I obtain this consent in writing, and so would ask that you complete and sign the proforma below if you are able to assist me. I will then collect it on the day of my visit. (I have also included a copy of the consent proforma for school staff).

Thank you for taking the time to read this letter. I hope to hear from you in the near future, indicating whether or not I may proceed and, if so, with whom I should liaise to co-ordinate my field work.

Yours faithfully,

Andrew Protherough Jones
E-learning for the secondary school: seeking the most appropriate solution.

A research paper conducted by Andrew Protherough Jones

RESEARCH PARTICIPANT CONSENT PROFORMA HEADTEACHER

Research Aims

1. To what extent are features of e-learning currently operational at the research school? (i.e. my own school)
2. What is required of a Learning Platform at the research school, from the perspectives of teachers, pupils and the Local Authority?
3. What does an examination of three other schools, who have received national acclaim for their Learning Platforms, reveal about their successful design and implementation?

I understand that the research methods used will be:

- Access to school ICT policy and any other relevant documentation
- Observation of your Learning Platform
- Questionnaires to Y7 and Y10 form groups (one of each year)
- Interviews with staff and a small groups of Y7 and Y10 pupils

I also understand that guidelines set out in 2004 by the British Educational Research Association, regarding the ethical conduct of research, will be followed and that consequently my school will not be named in the final research report.

I understand that the aims of the research are positive.

Having had a chance to consider the above, I hereby give consent for this research to be conducted in my school, and – in loco parentis – consent for pupils to participate. If I have any concerns I will list them below or on the reverse of this sheet.

Signed: ____________________________ Date: ____________________________

Concerns

[Blank space for concerns]

[Signature]

[Date]
E-learning for the secondary school: seeking the most appropriate solution.

A research paper conducted by Andrew Protherough Jones

RESEARCH PARTICIPANT CONSENT PROFORMA

Research Aims
1. To what extent are features of e-learning currently operational at the research school? (i.e. my own school)
2. What is required of a Learning Platform at the research school, from the perspectives of teachers, pupils and the Local Authority?
3. What does an examination of three other schools, who have received national acclaim for their Learning Platforms, reveal about their successful design and implementation?

I understand that the research methods used will be:

- Access to school ICT policy and any other relevant documentation
- Observation of your Learning Platform
- Questionnaires to Y7 and Y10 form groups (one of each year)
- Interviews with staff and a small groups of Y7 and Y10 pupils

I also understand that guidelines set out in 2004 by the British Educational Research Association, regarding the ethical conduct of research, will be followed and that consequently I will not be named in the final research report.

I understand that the aims of the research are positive.

Having had a chance to consider the above, I hereby give consent for the research to proceed as outlined, and will willingly participate. If I have any concerns I will list them below or on the reverse of this sheet.

Signed: ___________________________ Date: ___________________________

Concerns

[Blank space for concerns]

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