

Landscaping the ICT and E-Learning Service (2009 – 2012)

Teachers

Governors

Parents & Carers

Pupils

Schools





Swansea Edunet – Project Documentation

Date: 22nd September 2008

Version: 1.0

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Revision History

Date of this revision: 5th June 2009

Date of next revision: -

Revision date	Previous revision date	Summary of Changes	Changes marked
		First issue	
3 rd March 2009		Revised with additional learning platform benefits	-
5 th June 2009		Reformatted	-

Approvals

Name	Signature	Title	Date of Issue	Version

Distribution

Name	Title	Date of Issue	Version



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1. Introduction

This paper lays out the direction the ICT and E-learning Service should take from September 2009, with the view to achieving agreement on the general principles of how the service develops and is managed; this in order to continue to develop its effectiveness, and implement a three-year plan from September 2009 to July 2012. It is set in a wider context of the challenges we have set ourselves and how ICT is changing the face of education.

2. Review

- 2.1 Most stakeholders would agree that the service has improved from joint working, and delivered well in its first three year SLA period (2005-2008). The Audit Commission's recent review established both curriculum and technical areas had made significant improvements, and our own quality assurance surveys would suggest the service is good, as opposed to fair in 2003.
- 2.2 Developments are articulated in updates to school management, but particularly to all stakeholders through the annual reports which summarise in some detail the deliverables for each year: http://www.learn-ict.org.uk/materials/documents/swansea-elearning/ictcers_2k6_7.pdf
- 2.3 We were also awarded runner up status in the Becta ICT Annual Excellence Awards for support services to schools in 2008. Thirty five authorities from the UK applied, eight were shortlisted and Swansea was awarded joint runner up status. This is evidence of the service of having achieved some outstanding features.
- 2.4 In broad terms, the positive impacts on schools have been the gearing up of access by pupils to ICT equipment, resources and software; best practise in curriculum identified and cascaded; self review in progress; a managed service and infrastructure as effective as anything in Britain, and support for admin through support for all SIMS modules, including developments such as lesson Monitor and SIMS Learning Gateway in the secondary schools.
- 2.5 We also have a full learning platform developing with access provided to all secondary teachers by May 2009 and scheduled by January 2010 for roll out to the primary and special phase to include a pupil portal, too. The portal is ahead of the game in Wales in terms of functionality and is part of an ongoing *leading light* group of seven LEAs in Britain sponsored by Microsoft.



2.6 Also of note, are the SLA documents which elicit the responsibilities of both schools and suppliers in the service, and policies and procedures documentation which indicate how the service is delivered. The general thrust of their content remains as pertinent for the next three years as they have proved effective over the last four years:

- http://www.learn-ict.org.uk/materials/documents/swansea_elearning/slasec_full.doc
- http://www.learn-ict.org.uk/materials/documents/swansea_elearning/slaprispe_full.doc
- <http://www.learn-ict.org.uk/slts/docs/polproc2007.doc>

2.7 The 2003 ICT for Learning Vision and Strategy laid out what the landscape for the future five years or so ought to deliver for ICT for learners in Swansea.

Amongst the detail, the following challenges were stated:

- 1) How to create online learning environments that work
- 2) Integrate admin, assessment and curriculum
- 3) School and out of hours agenda (24/7 access and extended learning)
- 4) Change in roles for parents and teachers as new technologies open up possibilities for when and how learning can take place – pupils' extended learning, teachers as facilitators and parents as contributors
- 5) Ensure digital and visual literacy and entrepreneurship - key skills that will be needed in the knowledge economy
- 6) Embrace the digitally excluded
- 7) Personalisation of learning.

2.8 In 2008 we had got to a position on delivering on all of these challenges, although their embedding within learning and teaching will obviously still take some more time. The gap was not for want of trying, or lack of commitment. Rather, it needed time for schools to adapt to how ICT has evolved, which they have done enthusiastically (the positive aspect about the Welsh Education System is the time and space allowed for migration to new ideas, unlike England, for example, where a target was set for all schools to have a learning platform in place regardless of their position on the e-confident scale). Just as significant is what, back in 2003, were not widely available web 2.0 technologies which were needed to facilitate these changes; the web not as html and links, but offering interoperability of data systems, management and toolkits (blogs, wikies) to provide full web experience for the user.



3. Trends in ICT, E-Learning and Education

- 3.1 Over the intervening 5 years has shown development trends in how education is changing in respect of ICT and E-learning, which we need to be cognisant of in future planning of the service.
1. Democratisation of learning: the student is not as dependent on the teacher for content and support, and uses web technologies to create their own knowledge and share experience with their peers.
 2. HE to FE to Schools: VLEs/Learning Platforms were established in the HE sector by 2003, moved shortly to the FE sector thereafter and are now in schools. Most applications are extremely positive, but is this cascade model always a good thing for schools when technologies are developed in the HE sector for circumstances that do not necessarily apply to schools?
 3. ICT to E-learning; with the whole teaching and learning environment supported by technology, especially web-enabled technology. It implies e-confident schools, teachers and learners; systems are crucial and not just an option or available for some of the day. This is bound to increase the investment needed to support ICT/E-learning in the future and change the dynamics of what happens in the classroom and outside of it.
 4. CD to web browser enabled services and software, so all services can be delivered or accessed downline - with a benefit of time and cost savings on service delivery - and services accessible regardless of location.
 5. Thin-client technologies and cloud computing where we should explore the potential of central processing.
 6. Wireless is now a more stable technology and has a place in new school build in particular to create a more fluid environment through which broadband-enabled equipment can be accessed.
 7. Device to non-device specific. Follows on from point 3. Learning materials can be reached on any broadband device, so the services and products become the focus, not the equipment (principally desktops). It suggests, too, a refocus of the Education Directorate's activity on web services for learning and admin access, rather than on broadband lines and desktops. These are obviously still crucial and have to be supported, but much effort has been put into establishing these



- services from 2003; the future is turning to web-enabled technologies and embedding these in teaching practice in our schools.
8. Other Authorities (especially English secondary ones under their Building Schools of the Future) moving towards an integrated service with one provider reflecting what, in Swansea, was established as a single SLA with co-ordinated management four years ago.
 9. With the CYPP in progress, that our ICT strategy fits into the context of partnership working with the WAG; other public sector bodies; the voluntary sector; and private sector organisations. Above all, with the learner/child being at the heart of what we do, personalised learning pathways are a requirement to support, and the ICT developments we envisage should help deliver such programmes and personal portfolios.

4. WAG and Becta ICT Strategies

- 4.1 In Education ICT, the business, technical, curriculum, web and data link with each other to deliver school effectiveness. That's been our strategy since 2003, and it is now reflected by Becta in the *Harnessing Technology – Next Generation Learning* report 2008-2014 (2008).
- 4.2 Another factor in determining developments is around how the WAG has been developing its thinking. A recent report (*Transforming Schools with ICT: The Report to the Welsh Assembly Government of the Schools ICT Strategy Working Group 2008*) highlights issues which suggest the following key pointers are going to be the direction around which policy and funding will follow:
 1. Effective pedagogy
 2. Learning Platform
 3. Self Review through the ICT Mark
 4. E-safeguarding
 - In school
 - working in partnership with parents and the community
 - awareness raising, training and effective technological tools.



5. Organisational Effectiveness (with the following key characteristics)
 - the management of the ICT 'estate' within schools
 - planning the use of ICT across the curriculum
 - the use of ICT to support school administration
 - management competencies, for school senior and middle managers, and teachers
 - reliable technical infrastructure
 - pupil entitlement.

And against a backdrop of there being "no clear blue water" between technical, business and curriculum processes in ICT.

5. 2009-2012 Deliverables

- 5.1 In addition to committed ongoing services in the SLA and always working to make efficiencies whilst improving quality and range of services, the two major planks for the next three years will be a Learning Platform (sometimes called a Learning Portal) and ICT Self Review.

6. ICT Self Review

- 6.1 Self review helps schools plan and continually improve their ICT through a number of strands
 - 1) Leadership and management
 - 2) Curriculum
 - 3) Learning and teaching
 - 4) Assessment
 - 5) Professional development
 - 6) Extending opportunities for learning
 - 7) Resources
 - 8) Impact on pupil outcomes

In effect it is a toolkit to manage the totality of technology alluded to in the WAG section (above).



- 6.2 By 2011 all schools will have engaged in the process with encouragement for as many as possible to have achieved the ICT Mark. All schools should have reached a maturity level in e-confidence that helps them to be self sustaining in how they manage their ICT resources.
- 6.3 To ensure this delivers, there needs to be a very strong synergy between establishing the maturity level to which a school aspires, the learning outcomes that school wants to achieve and the proficiency of staff and pupils having access to equipment (procurement and financial planning) and using web technologies (access and curriculum/technical support).

7. Management

- 7.1 In the development of the single service from 2005, we developed an effective co-ordination of Education Directorate strategy and service for ICT for Learning through the following strands: *Architecture, Design and Standards; School Improvement; Curriculum, Business and Administrative Development; Lifelong Learning; Service Performance, Learning Platform and Project Implementation.*
- 7.2 What makes ICT different from other education services is how impossible it is to distinguish pedagogical from management, and from the technology. The report to the WAG working group supports this view:
- All providers have access to a support centre to be able to devise on the effective use of technology for learning, teaching, management and administration (p. 22)*
- and
- There is in fact no 'clear blue water' between the use of ICT for learning and the use of ICT for managing schools (p. 23).*
- 7.3 If the future requirement is to recognise the role of technology in whole school improvement (very much the Becta drive), suggests the need to have a directorate management structure which reflects the seamless nature of ICT in schools.
- 7.4 We have most of this structure in place at the moment because the overall management, strategy, budgets, and service deliverables to which all staff work are all tied up in one managed package through the ICT for learning SLAs and strategic management of the service and its personnel by the ICT and E-learning Manager.



- 7.5 Also, most units in the service are paid for through a mixture of core and delegated funding, so a unified management structure is required to ensure that the service delivers on fewer resources (personnel) in future, and that there is flexibility in all staff's roles to adapt to changing needs.

8. Learning Platform or Portal

- 8.1 An Learning Portal supports what you do in school in an online environment to improve access to quality teaching resources, enhance children's learning experiences and so contribute to the improvement of that school.

More specifically its key benefits can be:

- Improved leadership and management of the school on account of data and curriculum being integrated, and so better visibility of teaching and learning with improved diagnostics.
- Access from any location so more flexible use of curriculum resources & data, and not time bound by the school's opening hours.
- Allows for ease in sharing learning and so creates a community based on teachers, pupils and parents working collaboratively to benefit children's' learning (extended learning now possible in a very secure and managed environment).
- Overall, is an additional tool to raise standards and so has great potential to drive school effectiveness and improvement.
- **See Appendix 1 for full benefits.**

- 8.2 There is a parallel requirement (different project) to develop an Education Directorate Intranet/Extranet to improve communication of policies and documents between schools and the Education Directorate.

- 8.3.1 Thus, we are talking about a programme composed of two major products: a Learning Platform and an Extranet. Within the Learning Platform are other products. The platform is the priority and can develop sequentially over a period of three years. Grant and other income would be needed to speed up development, but the advantage of portal technology is module creation is task and finish, with maintenance thereafter requiring light management within existing, core resources. **See Appendix 2 for plans.**



9. Current Portal Development

- 9.1 We have the components in place for delivering a very effective Learning Platform or Portal:
- 1) Microsoft SharePoint technology has been selected and already implemented on our server system.
 - 2) A staffing structure has been implemented.
 - 3) A three-year development plan for a complete platform established. See again Appendix 2 for proposed timetable.
 - 4) A teacher portal for each secondary teacher with seamless SIMS, VLE, news updates, access to files and folders/email under one single dashboard.
 - 5) A Virtual Learning Environment in the secondary sector (MOODLE open source).
 - 6) A model collaboration environment for VLE course development (known as the 14-19 Federation MOODLE) with a number of GCSE courses created (bilingually in Welsh and English) in Mathematics, French, History, Geography and Art; and in English only for Science.
 - 7) A template MOODLE site for each secondary to own and use as they wish.
 - 8) Teachers' skills for using MOODLE learning environments is developing in each and every secondary school.
 - 9) SIMS Learning Gateway in the secondary sector. SIMS Learning Gateway is a web application that joins the main SIMS modules to the SharePoint portal. Its main benefits are the main SIMS modules can be accessed from any location and on any Internet-enabled device. Parents can access their children's curriculum and assessment, and so support their learning in a family context; teachers get flexible access to doing reports, for example. To be achieved is that a teacher is able to assess in MOODLE and the assessment automatically upload into SIMS (but that is a Capita responsibility and a risk to development).
 - 10) A project scoped with one primary school to develop a complete portal with a VLE specific for the primary phase throughout 2009.
 - 11) UKERNA standard video-conferencing functionality available for all schools with significant roll out achieved.



10. Potential Improvements

- 10.1 As budgets get more challenging there is the need to look at further cost saving mechanisms which still allow for improvement within contained, and potentially reducing budgets.
- 10.2 Identified for research are:
1. Automate procurement through e-trading thus not duplicating administrative resources between schools, finance and ICT staff.
 2. Secondary schools following more consistent approaches to staffing support, and procurement of software, equipment and technical architecture in order to allow for price reductions or release finances to invest in newer technologies (e.g. single desktop to Citrix).
 3. Aligned to the section on Management is how SLTS, Education Effectiveness and school staff could work more collaboratively in a pattern of federated working to gear up service implementation and share resources amongst both phases of schooling.
 4. How home, community and school ICT services (and Libraries) can be linked more effectively.
 5. Revisiting the 2003 strategy to secure home access to broadband for socially excluded pupils by using the Edunet broadband network where possible to link to the school connection. This would be a controlled and safe e-learning service within a *garden wall* approach.
 6. What a future school using ICT and E-learning should look like? How much IT equipment do we need in schools? How will a learning platform determine the school focus?
 7. The above relates to QEd 2020 which could implement the English BSF model in that we need learning transformation as an issue built into school build (not just statistics, bricks and mortar) and ICT as a building block to support how a 21st century school operates.



8. Look at setting up a Swansea eLearning Centre of Excellence.

- The Swansea portal is currently, according to Microsoft amongst the seven leading lights in Britain. In less than a year we have gained a great deal of knowledge about Microsoft SharePoint and experience of learning portals within schools as a whole.
- The eLearning Centre of Excellence could become an opportunity for Swansea to become the leading authority in eLearning and could become an area which would provide advice on creating eLearning materials, together with access for all schools and teachers to equipment and resources to create more advanced eLearning materials.
- We could also have the opportunity to potentially forge stronger links with the Swansea University School of Education for academic research. Also we could offer areas for collaboration/discussion with other authorities across Wales and potentially the UK.



Appendix 1: Full benefits of a Learning Platform

Improvement to teaching and Learning

The right hand column indicates changes expected to be seen in Swansea schools by 2012 as a consequence of using a learning platform. At its heart 35,000+ children, and young people, together with teachers, parents & carers, will each have their own personal web space for learning.

What we have done up to now	What a Learning Platform allows us to do better
1. Communities	
Parents or carers sent intermittent reports; diagnostics and assessment are after the event – end of term, end of year.	Parents and teachers have constant access to data for attendance and marks; diagnostics and assessment is in real time and up to date.
Parents or carers engagement in child’s learning sporadic.	Dynamic, triangular approach with teacher/support staff, pupil and parent in dialogue using SIMS, access to VLE for homework, collaboration and communication tools.
Schools sharing good practice and resources getting more problematic because of time and release from classroom constraints.	Online communities sharing the development of curriculum development thus gearing up production, better quality assurance through peer review and reducing nugatory activity.
2. Current Agendas facilitated	
Better use of teacher time	Once set up there are efficiency gains in workflow time for teachers, especially assessment, reporting and integration between learning tasks and their assessment.



Cross institution working	A user from one institution can share and communicate with another institution.
Help schools work together in 14-19 and Transition	A pupil can (few little hurdles here!) have the possibility of one account, one portfolio and one assessment system even if they attend two schools. Better sharing of data and portfolio between primary and secondary school.
Personalised learning	<p>Because content, activities and assessment is held in one structure with seamless access, the time restriction, potential additional online support for learners and better immersion to complete a learning activity can be extended and the pupil achieve a higher standard.</p> <p>A variety of approaches to presenting concepts and content can be provided giving the opportunity to offer multiple opportunities to understand a concept.</p>
Preparing for life	The ability to use sophisticated web technologies enhances life skills for the workplace of the future.
Pupil inclusion	As with supply teacher experience, a child in hospital or excluded from school, for example, can be taught remotely gaining a better quality of learning experience than currently.
Supply teacher effectiveness	The class teacher's full complement of resources and approaches can be used by a supply teacher.
Appropriate technology	Use of technologies pupils like and are familiar with.



3. How curriculum and data accessed	
Multiple systems and products, each having their own front page to log in for email, data, curriculum material etc.	Dashboard with one interface to get to all your systems. The entry pages for each product stripped out so it looks like one product to the user.
The systems have no integration so you have to undertake a multiple set of actions to go through your work flow.	Products broken up and re-organised to improve work flow.
Multiple user name and passwords so the user forgets, makes the use problematic and user gives up.	Single sign on with one user name and password to get at everything; easy to remember so encourages take up.
Communication linear and hierarchical e.g. an email trail goes from LEA to head teacher who passes to staff, or school issues from head to staff, parents, pupils.	Communication dynamic and "pushed" so a message goes straight from the provider to each user's own personal page. Blogs, Wikis provide collaboration to centrally held information which can be seen by all stakeholders in real time.
Have to manage your own folder file structure which makes sharing of resources dependent on action by an individual to post material.	Access to resources is centralised so makes common sharing much easier.



4 Products and Services	
Current products – Email MOODLE VLE Own drive Shared drive in school SIMS modules available on a specific machine and in school only	New products – SIMS Learning Gateway which gives access parents and teachers access to pupil data in more fluid ways (<i>school without walls</i>). Content creation tools for e-learning Content management systems for holding e-resources.
Based on html and static; read	Based on web 2.0 and dynamic; read and write. Pupils can create their own web learning content, for example.



Appendix 2: Learning Platform Rollout Plan

Portal Planning

The following plans for the portal are an outline of what we aiming to achieve for the next two academic years and beyond. The plans assume the portal team will have three full time posts as opposed to the two current established posts from September 2009.

To September 2009

- 1) Complete the rollout of the public facing content management system for the Terrace Road primary pilot, Dylan Thomas and Pentrehafod secondary schools.
- 2) Install and configure the Employment Training Moodle.
- 3) Continuous development of the School Data and Information portal. This will allow for documents to be sent from, and more importantly, be returned to Mike Jones all via the portal.
- 4) Create a school SMT portal; this links in with the School Data and Information portal.
- 5) Launch the Curriculum Collaboration area to a select number of subject areas for testing.
- 6) Improved news tool with the ability to embed images and searchable tags with a tag cloud.
- 7) Provide the ability for documents which get uploaded to the curriculum collaboration area to be easily tagged and given a brief description/abstract.
- 8) Address server infrastructure. The portal is currently only being run via one front end server. We need to ensure front end server two is brought on-line to provide load balancing and allow us to make use of the SharePoint search functionality.
- 9) At present the SharePoint servers are not covered by any anti-virus protection. This is not a major worry at the moment, but something we'll need to address as we make greater use of document handling.
- 10) Each time a new feature is added to the portal it will require a modest amount of training. In the short term training will need to be provided for secondary schools to ensure they are making effective use of the document management area (teacher portal) and the portal news tool.



- 11) Establish with each school a learning portal contact - ideally a member of the SMT - ensuring the portal is given every chance of successful adoption and integration within schools. As a portal team we will then be in a position to identify particular training needs within a school, monitor portal uptake and importantly receive feedback for future developments.
- 12) Resolve issues with Capita SIMS
- 13) Subject to 12, launch pilot primary school complete with pupil portal.
- 14) Plan roll-out to other primary schools.
- 15) Now the Microsoft Welsh language pack is launched we need to plan implementation of a Welsh language version of all publically accessible pages.
- 16) Address the online value proposition (OVP) of the portal.
- 17) Create a custom login screen, clearly highlighting the differences between public and private login options.
- 18) Achieve users on the admin network in schools have a single sign on for the portal.

Academic Year 2009 - 2010

- 1) Redevelopment of Secondary school Moodle – move to Moodle 2.0 with a new look and feel in line with the current portal design.
- 2) Redevelopment of portal home page, including an improved news tool with the ability to embed photographs. Also bringing a more dynamic feel to the front page so photographs can be taken from the schools galleries and displayed on a rotational basis on the home page. A calendar can also display all the school events taking place across Authority. Note that this will only contain events posted to the school calendars.
- 3) Look at the possibilities of automatically login into the portal at school, so when a user signs into their computer they can go directly to the teacher portal (or pupil portal) without entering a username or password.
- 4) Evaluate the options of linking assessment data from the VLE back into SIMS, helping to address the assessment for learning. This will require a Capita SIMS developers' license.



- 5) Develop Blogs – school, teacher and pupils' blogs will provide the ideal resource to get users communication and collaborating with one another across the Authority.
- 6) Begin work on the planning and development of a primary school VLE.
- 7) Rollout public facing and teacher portals to all primary schools.
- 8) Create a pupil portal for secondary schools – basic SIMS info, files and links to Moodle.
- 9) Curriculum collaboration area – once all primary school teachers are onboard (with user accounts), bring in more subjects/areas together with transition and cluster groups.
- 10) Planning of a centralised resources area.
- 11) Gear up the marketing of the portal.

Academic Year 2010 - 2011

- 1) Rollout the finalised primary school VLE to all primary schools and their pupils.
- 2) Development of on-line tools, similar to Google Docs. This will provide a word processor, spreadsheet and paint program in the "cloud" allowing any user with an internet enabled device to create documents regardless of the software they have on their computer.
- 3) Plan, develop and rollout of a family and a governor portal.
- 4) Potentially look at providing a Welsh Language version of secure areas of the portal.
- 5) Begin the planning and development of an e-portfolio.
- 6) Begin exploring the opportunities made available through using mobile technologies.



2011 and beyond

- Create the professional development and significantly expand the portals and services we can provide to the Education department as a whole.
- Greater and more meaningful links with other authorities. Look at ways of getting teachers from other counties, even countries working together, likewise pupils.