Local Solutions: Making the most of a Geography Department Intranet
Case Study – June 2005

Innovation in the use of the intranet to support Geography learning

Introduction

It needs to be clarified at the outset that the current software packages could well be replaced in the not too distant future with a more seamless user friendly interface. Discussions are ongoing at the time of writing, with a view to purchasing an interface which provides staff, pupils and parents with a single point of access for learning resources, pupil data, reports, etc.

This could well be based around a pupil's timetable and enable them to access class and homework based resources. It is conceivable that they will be able to use such a system at home, on holiday or in school to reflect on previous lessons and learning outcomes for the purposes of:

- revision for an end of unit test or examination
- accessing their current homework
- viewing future learning activities
- emailing their teacher for assistance
- collecting work that is being assessed by their teacher
- receiving a letter of commendation

Not only does this system provide one point of access, it also enables resources to be managed far more easily. Templates enable teachers to collate their existing resources, such as Word documents, PowerPoint presentations, video clips, in a uniform manner. This provides an institution with a corporate identity that is consistent from one department to another and facilitates a much more simplified training regime for both teachers and pupils, which will hopefully lead to the system being adopted more quickly and utilised more effectively and efficiently.

One key benefit of such a system is equality of access to the curriculum for all pupils. A great idea in one lesson can very quickly be shared across a network which will enhance pupils' learning and understanding. It is essential that teachers spend their time developing resources rather than managing them. Within the geography department at Horbury, I spend an average of 45 minutes a day maintaining and updating all the electronic resources. This is time that could be better spent developing new learning resources to enhance pupils' understanding and development of geographical skills.

In short, we are looking for a system that empowers teachers and removes the high dependence on specialist ICT technicians. We want resources that stimulate and challenge pupils and enable them to reach beyond their perceived potential. It is clear the technology and software is now available and within the next 12 months we are looking to move our very successful electronic based learning programs to a wider base across and beyond Horbury School.

Whilst the current intranet has proved highly effective with a limited number of staff, if we are to broaden it to a wider user base within Horbury, we need easy and effective access to the plethora of resources that will inevitably accrue as more and more people utilise it. Teachers need something that is intuitive and simple to operate. In addition, they want to see a return for their investment of time. They don't mind a significant investment at the outset, provided in the longer term they can spend time reflecting and slightly amending their initial resources.

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Furthermore, with the advent of multimedia resources such as PowerPoint presentations, video clips and interactive presentations that are both memory hungry and broadband dependent, we need a package that can deliver resources quickly and accurately.

Video clips are highly effective and very popular with both boys and girls. Research from pupils at both KS3 and KS4 indicates that they find the use of such resources stimulating, thought-provoking and accessible. They report their understanding of key yet complex ideas is simplified. Furthermore, they 'keep the lesson going at a brisk pace and minimise the opportunity for disruption.' Pupils also let it be known very early in our development of e-learning resources that they 'wanted access to the presentations and the video clips both in school and at home.'

To run these multimedia presentations across an intranet on a wide scale, has serious implications for the performance of the network as a whole. In addition, at this moment in time whilst many pupils have access to the intranet, only a small proportion has a broadband facility.

We use Pinnacle Studio Deluxe to convert analogue VHS videos into digital mpeg files, and embed them within PowerPoint presentations. To convert the average five-minute clip will take something in the region of 20 minutes time.

Furthermore, across an intranet these video clips need to be small in size if they are to be manageable, but both the quality and size of the finished clip can often be low quality. In addition, to put these on to the intranet demands a level of ICT expertise that is beyond the remit of the teacher and is therefore an immediate stumbling block to their wide deployment.

Therefore, as this project is designed for fellow colleagues to consider and possibly implement, I decided from the outset that resources had to be developed that met the demands of the students but were made available to them across a limited intranet. I decided to manage the deployment of all resources without reference to an ICT technician. I felt that this would be more typical of the type of ICT infrastructure within the majority of geography departments. As a result it is hoped that some of the ideas may provide a simpler and more accessible starting point for the development of e-learning resources beyond the classroom.

When we first started to think about this project we had grandiose schemes of using a variety of leading edge software. It soon became apparent that the time required to master these packages and the imminent OFSTED inspection was a time frame that simply wasn't going to work. In hindsight, it was probably fortuitous because it made me stop and consider and consult with pupils what would help them. What emerged was a series of strategies that can be easily implemented to set a department on the road to raising achievement.

Electronic resources within Horbury are stored in a departmental folder on a dedicated multimedia machine with limited access to the school network. This PC is capable of video editing, access to the Internet and has a range of generic and subject specific software. This is a workhorse of the Department. In order to ensure resources are backed up by have a PC at home with several hard drives with two backup copies of each resource. Excessive most certainly, but resilient most definitely.

Resources are developed by colleagues and myself using KS3 and KS4 Boardworks PowerPoint resources as a starting point. We have a title slide which outlines the structure of the lesson with the clear learning target that is visible throughout. We then:

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- create additional customised slides.
- utilise materials from other software packages such as Birchfield's interactive resources.
- include additional relevant material that we can insert through the use of scanned images.
- edit a video into a series of mpeg clips.
- anything else that we feel is appropriate.

The finished resource is then stored in a clearly named electronic folder within either the KS3 or KS4 resource bank. Colleagues review the materials, amend as appropriate and then deliver them. I oversee the management of these resources and ensure that the master copy reflects all the ideas that are being tried out. Colleagues can then take these in subsequent lessons and edit them accordingly.

As they all have a laptop they can store these on their own hard drive and then delete them when they have finished with them. It is rare to have more than one version of a resource in order to minimise space. However, if the need arises we simply add the teacher's initials at the end of the filename to indicate their unique adaptation of the master resource. It must be pointed out that this is kept to a minimum, and colleagues are encouraged to review their resources before they use them in subsequent lessons, and update them as appropriate.

By way of an example, in January 2005 we developed a significant resource for the OCR syllabus C Decision Making Exercise relating to famine and unfair trade. This resource was subsequently used with Year 9 in summer 2005. Due to the Live8 project and the subsequent writing off a debt of 18 African countries on the 11th of June 2005, news bulletins from SKY news were recorded on to video. They were then converted into MPEG format and subsequently inserted into the original PowerPoint presentation, and the network copies updated and staff made aware of the amendments.

When these resources are required in the teaching programme they are copied into an area on the network where all geography staff can access them. Furthermore, the same resources are put into a shared area on the network where pupils can access them both in school and at home - although it has to be said that the delivery of files of any size is very slow when accessing from home. Therefore, if I want resources to be readily available on the school website I ask Phil Waud, the KS3 ICT coordinator and school website manager, to adapt the resources so pupils can access them from home. However, as he is a mainstream teacher and if that this practice was to be spread right across the school he would spend much of his time updating the website with resources. If those resources include video clips, they need to be stripped from the PowerPoint presentation and made available as single discrete resources. This lack of control on my part and unsustainable use of Phil's time led to a discussion of software packages that might facilitate a more efficient and effective deployment of such resources.

It was at this point that it became clear I needed a significant training investment in the use of several software packages. It also became clear that the original intention to use 'Moodle' wasn't going to deliver what we had at first expected in December 2004.

All things considered, and notwithstanding the imminent OFSTED inspection, I decided to keep things very simple and within the area of my current experience and expertise. In hindsight this was a wise move and lead to me recognising more acutely than ever, that we must move away from teachers spending hours developing online resource infrastructure and leave that to the professional providers to deploy our resources.

Bernard Dady, Geography advisor with Kirklees, once observed a GCSE group I was using ICT to introduce a new topic to ahead of an Ofsted inspection. He commented that he 'liked the use of ICT

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within a lesson but unfortunately it overshadowed the geography.' It was a good lesson to learn at an early stage. And he we were in danger of letting the ICT dominate at the expense of the development of the geography.

I appreciate that not every school can go out and buy off-the-shelf packages, but equally so we maybe ought to look more carefully at the cost of time that teachers spend on learning new techniques that when analysed, do little for the development of the specific geography resource. If I want to car to work effectively and efficiently I seek out a mechanic, I don't go and learn how to strip an engine! We need to be more rigorous in the deployment of our time and ensure that it is focused, efficient and relevant. It is far too easy to get caught up in the glamour of seeing a web page that we spend ages designing which in the long run probably won't deliver an effective portal for teachers, students or parents.

Add to this the emergence of the USB pen. It soon became clear that we could soon deploy our resources, albeit not strictly using an intranet, but as an interim measure until such time as a portal is available, in an efficient and more cost-effective manner.

We purchased 10 128mb USB pens, 50 blank DVDs and 200 CDs. Pupils could still access all the resources across a shared area and some limited resources on the school website, but now we could deploy our resources far more effectively.

The USB pens were available for loan, and pupils were given the opportunity to purchase their own at a discounted price following a deal we struck with PC World. Over 100 pupils purchased a USB pen.

Resources could then be freely shared with the pupils, managing their own resources and freeing up staff time. For those pupils who preferred a more permanent copy, they could purchase CDs or DVDs. This proved very popular with the Decision Making Exercise earlier this year. Over 75% of pupils following GCSE geography in year 11 borrowed or purchased a DVD of the resources. Furthermore, in discussions with parents it became clear that they were able to assist their children in preparation for this important element in their GCSE course. They love the fact that children were focused and not aimlessly wandering around the Internet. As the resources were all based on the learning plans for each lesson they could assist their children if they had any misunderstanding following a lesson. In addition to this pupils and parents could contact me via email for additional support if it was required.

This resource pack amounted to two DVDs due to the high volume of video clips that were included. To put these across the Intranet would have been extremely time-consuming and brought the server to an abrupt halt. Therefore, we used the school website alongside these multimedia presentations to include several mpeg clips of me giving pupils guidance on how to prepare for and complete the examination.

This resource was also shared with a large number of schools across the OCR network and the feedback has been extremely encouraging to date. Furthermore, these links enhanced our resource base by being able to access other school websites with additional supportive material for our pupils. This ranged from a series of web sites to support students' independent research through to comprehensive resources and specimen exam papers.

All of which contributed to a set of stunning examination results. Over 80% of pupils achieved a grade C or above 10% improvement on the same examination a year earlier. 98% achieved a grade A*-G, with many pupils exceeding their target grade.

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Clearly, when resources have such an impact it is not just the pupils who are successful and motivated, colleagues have a sense of fulfilment and motivation to go on to create further resources. It has also enabled the ICT skill level of each colleague to be enhanced but in a way that has caused a significant increase in workload. Colleagues have been supported but encouraged to work at their own pace, this is essential if inexperienced ICT users are to embrace this dynamic but very challenging teaching medium.

As it was becoming clear that we had limited ICT expertise in relation to intranet development, it was fortuitous that we came across Oxford University Press Geog.World, which whilst it is aimed at KS3 it has provided a professional Portal to deliver high-quality resources which pupils can access very efficiently in school and at home - http://www.oup.co.uk/oxed/secondary/col/geography/geogworld/

It is based on an annual subscription and links to the Geog.1, 2 and 3 KS3 texts. Once again it is very cost-effective and provides an area of safe surfing for pupils. Teachers, pupils and parents can access this portal with a simple username and password that is exclusive for Horbury School.

Pupils have found this very helpful, and it has enabled them to access resources and complete homework in a far more efficient manner. For example, a GCSE group were asked to collect a series of development indicators for a range of 30 countries both LEDCs and MEDCs. They were shown how to access the resources, and within 20 minutes had created a spreadsheet of all the data and a further 20 minutes completed an interim analysis of the data. If they had used traditional techniques such as Philips Atlas a conservative estimate would suggest twice the amount of time been devoted to this task. Both girls and boys preferred this method of working and they accessed the portal at either school or home.

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