

Local Solutions: making the most of a Geography department intranet

Evaluation Report

August '05

Sections

1 Project aim and objectives

2 Project methods

3 The baseline

4 Project outcomes

5 Key lessons

Project leader
David Mitchell
Institute of Education

Project evaluator
Fred Martin
Bath Spa University College

1 Project aim and objectives

This section presents the project aim and objectives, together with some comments about how the aim is intended to be interpreted.

1.1 Aim

The project aim can be summed up in one clear statement.

Aim: Innovation in the use of an intranet to support geography learning.

1.2 Objectives

This aim can then be interpreted and implemented in a myriad of ways as relevant to the starting point and the needs of the geography department in each school. These can be presented as set of objectives against which the success of the project can be judged.

1. To act as a focus for curriculum development in ways that have a positive impact on the quality of the geography.
2. To explore ways in which the use of an intranet can affect the pedagogies relating to teaching and learning, for example, its potential for use in assessment and in how resources can be accessed and used.
3. To investigate ways in which an intranet can help raise standards of achievement in geography.
4. To create increased motivation for both pupils and staff.
5. To engage the staff in innovative practice and action research
6. To allow for the collaboration of staff who are engaged in the project.
7. To create opportunities for the project findings to be disseminated to the wider geographical community.

1.3 Interpreting the aim

There was initial discussion by the group of teachers about different ways in which the word 'intranet' should be interpreted. The word is a technical term that could have limited the project in a number of ways that would not have been helpful. Instead, it was felt more helpful to focus on the more all embracing idea of developing online resources, irrespective of details of software, delivery systems and other technical points. Although differences in the technologies being used became evident during the project, it is not the intention that this should play a major part in the evaluation.

It is also of interest to note that in the aim, the focus was intended to be on the 'learning'. This too is a word that needed to be broadly interpreted. For some schools, the emphasis was to be more on using an intranet as a means of storing the department's resources. In others, the emphasis was to be more on teaching and assessment. The ultimate aim, however, was that the pupils' learning would be positively affected. The ways in which these words could be interpreted had the advantage of allowing geography departments who were working in different contexts and who were at markedly different starting points, to develop their own routes forward.

2 Project methods

This section deals with the selection of schools and how the project was organised.

2.1 List of schools

The project began with seven schools chosen from different parts of the country.

- King Edward VI School, Morpeth
- Stanchester school: Somerset (Community school)
- Edensor Technology College: Stoke on Trent (Technology College)
- Horbury School: Wakefield (Language College)
- Deepings School: Peterborough (Community school)
- Simon Balle School: Hertford (Humanities College)
- Royal Docks Community School: London (Community school)

2.2 Schools and staff

These schools were selected as a result of recommendations to the project leader. They were intended to be representative of schools in which there were active geography teachers who had expressed an interest in intranet development. They provided a good range of locations and contexts with which to work, though from the outset, it was clear that there were a vastly different set of starting points within the group. The different schools also had different purposes of intranet development on which they wanted to focus. A challenge in the project was to be able to ensure that each school felt able to pursue their own development, yet at the same time, feel part of a group that was engaged in the same aim and objectives. So although collaboration was one of the project objectives, there was the potential that these different agendas could mean that while sharing of ideas would take place, it might not be relevant or possible to implement these shared ideas. It was intended that two teachers should represent each school. Although most teachers were teachers of geography, there was also one pairing with an ICT specialist. Staff from the schools were highly committed teachers of geography but with enormously varied levels of technical competence in the use of ICT. A factor that also proved to be relevant during the project was that while some had easy access to higher levels of technical support and equipment, others did not.

2.3 Organisation

The project was led by a project leader (David Mitchell from the University of London Institute of Education). The project leader set the initial aim and provided the organisational framework within which the schools worked.

2.4 Meetings

The project involved three meetings at which all the teachers were invited to attend.

Initial meeting

This took place at the University of Oxford as a residential experience over two days in December 2004. The aims of this meeting were to:

- introduce teachers to the project aim
- create an atmosphere that encouraged enthusiasm and creativity
- provide some ideas for development
- present each department's starting points
- share initial ideas
- write an action plan.

Mid-point meeting

This took place during the annual Geographical Association's conference at the University of Derby in April 2004. The aims of this meeting were to:

- report on how the action plan was progressing
- share ideas with others
- provide some additional ideas for development.

Final meeting

This took place in June 2005, also at the University of Derby. The aims of the meeting were to:

- present summaries of each school's progress
- celebrate success
- share ideas for further developments.

In addition to the meetings, an email network was set up through which information and ideas could be exchanged directly between the teachers and between the project organiser and teachers.

2.5 Funding

The project was funded through the DfES with a grant of £25K. This allowed for teachers to be funded to attend meetings, though not all teachers were able to attend all the meetings due to other commitments. Although there was almost full attendance at the first two meetings, the final meeting proved to be the most problematic on account of other pressures in schools during the summer months.

2.6 Evaluation

A project valuator (Fred Martin, Bath Spa University College) was appointed at the start of the project. The evaluator was able to attend all the meetings. The project leader also played a major part in project evaluation through survey work, interview and providing a compilation of findings towards the end.

Evidence used to evaluate the project came from a variety of sources:

- teachers from each school gave presentations at each of the meetings with these being available as PowerPoint and other digital files
- by survey towards the end of the project, though schools were encouraged to provide their final reports in whatever format they felt to be appropriate
- by a sample of interviews with the project leader and evaluator.

It is probably fair to say that whatever the evaluation process lacked in standardisation, this was more than compensated by the variety and in some cases, the depth of responses from the different schools. This ranged from one that had engaged in a thorough statistical analysis of how the project had affected their pupils' learning, through to more general comments that although valuable, were impossible to quantify.

3 Project baseline

Although the initial meeting aimed to provide no more than a baseline from which to measure progress during the course of the project, it is relevant to look at a range of issues that arose during this meeting. This is because it is important to understand the unique features of each department's starting position when embarking on the project.

3.1 First meeting

The first meeting of the project team in Oxford served to share existing experiences, identify key issues and provide an opportunity for the participating teachers to draft action plans. One overall issue from both this and from subsequent meetings, was that of the varied experiences and levels of technical ICT-competence in the group. All, however, appeared to be competent users of ICT for teaching.

3.2 Special input

The meeting also consisted of some input that although related, was not strictly focused on intranet pedagogy and content. This input from invited speakers consisted of:

- Infomapper: an online mapping resource that could form part of a geography department's intranet allowing access to maps, other resources and tools with which to use them in teaching and learning.
- Bolt Education: resources that provide web searches that could form part of a school's intranet, enabling pupils to work on individual studies from either school or home.
- Extreme environments: a presentation by Nick Middleton (TV series) that used images from extreme environments and presented ideas about the geography of places.

3.3 Comment on specialist input

This input was of interest to the teachers, partly on account of the general lack of opportunities for staff development. However and perhaps with hindsight, its relevance to developing an intranet was not entirely apparent. It might, for example, have been of greater value had input been provided by some of the teachers in schools that have already set up extensive web sites but who were not part of the project. There might also have been a case for some of the technical matters relating to setting up a web site to be explored, for example, with information about basic web authoring and the use of different Virtual Learning Environments (VLE). Although the emphasis of the project rightly was on the geography, these technical matters can present initial barriers that some teachers need to understand and to which they need to find solutions. A problem, perhaps, is that the varied levels of experience in the group would have required a differentiated set of workshops in order to help each teacher move on from their starting point. In spite of any reservations, these sessions proved to be positive and creative experiences that were of interest and in which all could share.

3.4 Starting points

Each school provided input as to their starting point in the project. Some schools had already developed complex sites that served several purposes. One, for example, was already using an intranet to help pupils understand criteria for assessment and so that they could be clear about how to make further progress. There were also differences in the extent to which technical support was available, and indeed, also to which there was support from senior management to provide the right conditions in which key decisions could be taken and implemented. While one school had access to a full time webmaster, another had neither technical support or any degree of commitment from senior management.

3.5 Software and systems

The teachers were using different software and systems with which to create and maintain their web sites. Some schools presented a large amount of technical information about these systems while the teachers in at least one school were at a starting point with no knowledge at all about such systems. It is clear that technical matters, such as choice of web authoring software, does have a marked effect on what is done and that some ability to communicate in technical terms is needed, especially it seems, when discussing needs with ICT technicians. It is, however, also clear that these kinds of considerations are likely to divert geography teachers from the more important job of focusing on the teaching and learning in their subject. Ideally, geography teachers need to be able to articulate what they want and leave the technical considerations of how to do it for others to resolve. Time spent maintaining a web site does have the advantage of keeping it under the control of the department, but it diverts time from the more creative process of teaching the subject.

3.6 Web contexts

Some teachers described situations in which they were operating their intranet as part of a whole school web site, or indeed, within a wider LEA framework. This affected whether the department's site was able to fit into an existing structure and perhaps be constrained by it, or be able to create their own tailor-made resource that they would have to independently maintain. In some schools, the geography teachers were regarded as pioneers who were breaking new ground and who therefore had to find their own solutions.

3.7 Purposes for websites

Each school described the different purposes for which they were using their intranet. One, for example, was using an email link that allowed pupils to directly contact their teacher with individual problems. There was an example of a school in which the site was used as a drop off and pick up point for homework. Another had reached the point where the emphasis was moving away from the teaching towards developing resources and activities that the pupils could access for their learning. The idea of making more extensive use of multimedia resources, including sound and video, was expressed by several schools. The recognition that these types of resources could play a key part in helping pupils to learn had been investigated by one school in which ideas about multiple-intelligence was playing a part in their rationale for developing online learning. Online interactive tests and access to past exam papers represented another purpose for which some sites were being used. By the end of the meeting, a list of options was produced, the aim being that each school would choose their own focus for the action plan.

3.8 Barriers to progress

Each school also presented their individual sets of barriers and ways that they had found to overcome some of them. The usual range of ICT-related problems were evident:

- lack of time to develop and constantly maintain a web site
- lack of technical support
- lack of training in the use of intranet software and systems
- lack of commitment and allocation of resources from senior management
- lack of enthusiasm from some 'luddite' members of the department (a minority situation)
- lack of clarity over copyright and the effects of this on intranet and open access use
- technical issues over password access.

None of these are problems for which there are immediate solutions within the control of teachers at departmental level. They do, however, need to be recognised because of the extent

to which they can act to militate against the development of an intranet, an idea that many schools have already proved to be effective in raising standards.

3.9 Specialist schools

It is of passing interest to note with regard to technical support and commitment to developing a geography department intranet, that there appeared to be little, if any, correlation between schools that had specialist status in technology and those that had either a different specialism or none. Perhaps one might have expected such a link to exist. Indeed, one school with technology status was the only one that dropped out of the project. It would seem that a specialism in technology does not always imply a commitment to the use of Information and Communications Technology, or perhaps to extending its availability to all subject that are taught in the school.

3.10 Teacher reactions

The reaction of different teachers to the presentations presented something of a dilemma. While some were clearly confident to share what they had done and were aiming to do, others became conscious of their own lack of progress and questioned the contribution that they would be able to make. A problem for those who had already developed complex sites was that they had already embarked on routes that were in part determined by the technology and prior decisions. This made it difficult to adopt new ideas that might pull in a different direction. Those starting from a lower base felt they had little to share, apart from their problems and frustrations. It was important to state that those at the lower starting points would, nevertheless, be able to provide useful case studies for the vast majority of schools outside the project whose starting points are often even lower!

3.11 Key points

By the end of the meeting, five components in online learning had been identified.

- A pedagogic rationale: an understanding of how the use of online resources can help to make teaching and learning accessible to the students
- The software delivery system: the software and ICT architecture for the resources
- The infrastructure: access to resources, staff training and technical backup
- The contents: what to put on the system (linked to aims and foci) and degree of interaction
- Effects on the learning in geography; the ways in which online learning can affect work in the subject.

A list of purposes for which an intranet could be used was also compiled:

- manage the department, e.g. its resources and administration
- homework: to set and provide online resources
- revision: to play a part in raising achievement as measured by exam performance
- differentiation: to be made easier by working with digital files and selective access
- revisit the lesson: for pupils who had missed a lesson or who wanted to revise
- magazine and news update: to provide in information
- assessment criteria: so pupils could be helped to raise their levels of achievement
- Exam Board courses: to provide information
- independent enquiry: to take advantage of ICT to affect the pedagogy of teaching and learning.

3.12 Action planning

By the end of the meeting, each department had drafted an action plan that set out the foci for the development of their intranet. Some funding was made available to help teachers create the

necessary time in which to take their plans forward, though the budget for this was limited and would need to be requested on an individual basis. It was clear that the time scale for implementing the action plans was tight, i.e. with only five months until the final evaluation meeting. Teachers were, therefore, urged to make sure that their objectives were realistic and that at least some progress could be made, irrespective of their different starting points.

These actions plans were variously to do the following. The plans for each school are set out separately.

School A

- Manage the geography department's resources
- Improve the level of home learning and homework

School B

- Improve the sharing of departmental resources
- Improve access to resources by pupils
- Develop personalised learning by pupils

School C

- Increase the level of independent learning by pupils
- Enable easy access of resources for homework

School D

- Improve access to resources by staff
- Improve access to resources by pupils
- Enable easy access for homework

School E

- Develop independent learning for post 16 pupils
- Provide interactive essay plans for KS3 pupils
- Create a virtual visit to the Himalayas for GCSE pupils

School F

- Ensure that homework is completed

School G

- Enable effective revision for KS4

4 Project outcomes

Once the action plans had been devised, the teachers although having access to each other via email, were largely on their own with regard to finding 'local solutions'. The extent to which individual teachers did make contact with each other is hard to determine, though it was probably relatively limited. Although the sharing of ideas and feeling part of a project were important in terms of motivation and interest, the practical tasks of developing a departmental web site could not be resolved by taking another department's solutions 'off the shelf'. Another factor that went against more direct co-operation on a practical level was that the departments had chosen to focus on different purposes for their sites.

4.1 Interim meeting progress report

By the GA conference in April, all departments were able to report some progress. Some had made significant progress in their actions plans, for example, in developing the use of video resources and in taking the opportunity through the project to make further developments and refinements to their sites. One school had carried out extensive statistical research into how their pupils had made use of the intranet. A few schools had struggled to go much further than their starting position, though even some small and important starting steps had been made, for example, by engaging in fundamental planning about the purpose of the intranet and in setting up a web site structure.

4.2 Changes to initial plans

By this stage in the project, some of the initial action plans had been changed, mainly with modifications that either added new purposes or made other kinds of changes. One, for example, had extended its purposes to include promoting independent learning and to act as a portal to other web sites. Another had already begun to think about moving beyond managing resources for staff towards ideas about how the resources could be made accessible to the pupils. The research carried out by some schools was also starting to affect their thinking in how best to use their intranet, for example, in how girls and boys reacted differently to web-based independent learning. As a temporary measure, one school had taken an alternative approach by making CDs for their pupils in order to provide them with access to the necessary resources.

4.2 The final impact

By June 2005, the project had reached its end. At that stage, each school was required to provide feedback in whatever format they felt to be appropriate, though guidance was provided in the form of a questionnaire. There were three key questions that needed to be addressed. It is on these key questions that the remainder of this report will focus.

- What impact had there been in the pupils' learning?
- What had been the impact on the geography curriculum
- How had staff CPD been affected?

Although these three questions are not entirely separate, they can serve as a framework for the evaluation of the project's aim and objectives.

4.4 Effects on pupils' learning

The effects of an intranet on pupil's learning can be hard to clearly establish without being able to compare with a control group in the same year. This is difficult to justify when one believes that a development is going to bring advantages! However, some comparisons can be made with data from years before the intranet was introduced or further developed. The following commentary provides a review of ways in which the teachers reported on how their pupils' learning had changed.

a) Independent learning became easier to set up and for pupils to carry out successfully. Most pupils were able to access resources both in school and at home. In one school, the figure of 90% was given. Figures were not available for pupils in other schools, though some will have been significantly below this, perhaps nearer to the national figure of about 60%. The pupils in one school were clear in that they wanted to be provided with a list of relevant web sites for their research. This was to counteract previous negative experiences when time had been wasted by accessing unsuitable sites. Perhaps further training in the use of search engines and other techniques in web research could be an alternative solution to this problem.

b) It was revealed by one department's research that there were some gender differences in how independent learning was perceived. As a generalisation, girls preferred to be taught directly by a teacher, while the boys enjoyed the opportunity to learn more independently. It would be interesting to further investigate the reasons for this and in particular, to find out if there is something inherent in using web-based resources that girls do not like and perhaps that boys like more.

c) A higher level of motivation was reported by several departments. Although this in itself can be hard to quantify, the results can be translated into higher exam grades and in the number of pupils who opt to take geography. One department was clear that their GCSE grades had improved, especially for the boys, and that the introduction of the intranet had seen a marked increase in the number who opted to take geography at 'A' level. This was having the side effect of causing some resentment amongst staff in other departments, i.e. ones that did not yet have an intranet. One department that had developed the use of digital writing frames on their intranet, reported that KS3 grades had improved. They did, however, note that although the pupils did benefit from and enjoy using these writing frames, there were some possible dangers in reliance on them beyond the point where the pupils should be capable of working without them. Some pupils found that it took longer to type their work than to write it by hand. This, however, is a problem that can only be resolved by even greater reliance on digital worksheets and perhaps also by a whole school plan that ensures that all the pupils can type efficiently. Although an obvious need, there seem to be few schools that actually do this, either at primary or secondary level!

d) There are some advantages of using an intranet with regard to the content of the geographical material in that it is easier to keep it up to date. It is also the case that the sharing of resources between members of the department can bring about a significant improvement in the quality of the resources that they produce. The use of an intranet as a central storage space for resources creates the conditions in which this is likely to happen.

4.5 Impact on the geography curriculum

a) One way in which the curriculum changed related to the variety of resources that were made available to the pupils. One school, for example, mentioned that the pupils were making increased use of photos in their work. The use of video was also providing resources that were useful, not only for their subject content, but also as guides to how to learn. One department is developing guidance for their pupils in which the teacher is the presenter. Animations were also being used by at least one department as an aid to developing an understanding of geographical processes.

b) The use of an intranet makes it possible to present pupils with a greater variety of activities to aid their learning. These can include simulations, writing frames, graph work and working with

photos. The pupils in one school commented that they would like to have some more 'exciting' things to do on the intranet, by which they appeared to mean games. Although this request is understandable, teachers will need to exercise some care in giving the impression that all aspects of using a computer needs to involve playing games. One department commented that the move towards digital resources was opening up opportunities for the teachers to be more creative in their teaching and the resources they were producing. This is especially the case where an intranet is linked to an interactive whiteboard.

c) The development of a department's intranet appeared in some schools, to be an isolated and unique development. In others, it was part of a wider plan that involved a whole school web site and the development of a virtual learning environment (VLE). One school was embarked on a plan to provide the pupils with laptops. These developments will inevitably have effects on how the curriculum is planned, taught and assessed. It does, for example, help to create closer links between home and school. While pupils will be able to create a seamless link between the two, it will also be possible for parents to play a more active parting their child's education.

d) Several teachers expressed some concerns over remaining within copyright laws. This is a real issue for work in geography, for example, in ensuring that photos and maps are being legally used. There is considerable uncertainty over the legal position with regard to using digital resource and concerns over any material that may be put on a non-password protected part of a school web site.

4.6 The effects on staff CPD

a) The project brought together a group of teachers who, as has previously been stated, had a variety of different skills and experiences. Some of the teachers were ASTs in geography, while one was in his NQT year. There were also teachers with vastly different levels of competence in the uses of ICT. From the various meetings and documents, it can fairly be surmised that this variety produced a useful exchange of ideas, even though as previously noted, not all of these ideas could be implemented in each school.

b) The project served to create an opportunity for action research in all the departments. In two of the departments, there was a thorough statistical analysis of the project's effects that the teachers were able to use in their planning.

c) In at least one school, involvement in the project had meant taking on an additional role to explain the work to teachers in other departments. There was also an increased cross-fertilization of ideas between the geography and history departments in one school. Digital technologies do not respect traditional subject boundaries.

d) At two of the meetings, the project leader organised additional input from publishers and others. At the interim meeting, for example, one publisher was able to provide all project members with free access to their subscription web site. It seems that the Geographical Association is able to draw on the goodwill, or perhaps the commercial foresight, of numerous publishers when working on such projects. It is certainly an input from which those involved in the project will benefit and it is to the publishers' credit that they are so willing to be of assistance.

e) A useful product following the final report came in the form of a PowerPoint presentation that one school produced as guidance for any department that is considering setting up an

intranet. This sets out the key questions and options about which decisions need to be taken. This presentation is available on the GA's web site at this address.

<http://www.geography.org.uk/projects/adepartmentwebsite/gettingstarted/>

f) Wider dissemination of the project's achievements will be made by the project leader through the GA's journals and through two sessions at the GA's annual conference in 2006.

5 Key lessons

In this section, some key lessons are presented for which the project has provided evidence.

- a) The selection of schools and the teachers who represented the geography departments, provided a limited, but perhaps representative, sample of geography teachers who are active and committed to developing high quality teaching and learning.
- b) There is no escaping the conclusion that there are many barriers to setting up a departmental intranet, in part because of the technical infrastructure that is needed to support it, but also because of the 'political' issues that can arise in a school and the lack of influence that teachers of a minority subject can bring to bear on decision taking and the allocation of resources.
- c) The support of senior managers in the school is essential if an intranet is to be successfully developed.
- d) The many possible purposes for which an intranet can be used need to be evaluated in the initial stages of development so that the department can focus on a limited number of these purposes. At the same time, there is a need to create a structure that is capable of being expanded to cater for other needs at a later date.
- e) Even within the extremely short time span and limited budget of this project, there has been demonstrable evidence that the use of a departmental intranet is capable of playing a key part in helping to raise levels of achievement in the subject at every level, i.e. amongst pupils of different ages, genders and levels of ability.
- f) The development of online learning brings implications with regard to the pedagogy of teaching and learning, the understanding of which appears still to be in its early stages.
- g) Although teachers have tended to focus on using digital resources for their teaching, the need to pay more attention to the pupils' learning becomes obvious with experience in using these kinds of resources.
- h) For each of the departments, this project has served to act as a stimulus to developing an intranet; for each school, however, the 'project' will run on and be further developed.
- i) It is difficult to provide a single model for the development of an intranet that could be generally applicable, though there are some basic key lessons that would apply to most departments.
- j) A small and tightly run project such as this, has proved that it is able not only to create valuable professional development experiences for those directly involved, but also to provide guidance to the whole teaching community.

I would also like to add a note to say that involvement in the project has been a pleasure, a privilege and has provided me with an increased insight into a topic of particular personal interest.

FM

July '05