

Web Resources for Teachers by Teachers

(WEBRITTe)

Raising Standards and Transforming Teaching

Report on the pre-pilot evaluation
from January - March 2001

Written by MirandaNet Fellows and Advisors
for the DfEE

Contents

1: Executive summary

1.1	The brief	1
1.2	The process	1
1.3	Results	1
1.4	Overview of main survey findings	2
1.5	Recommendations	3
1.6	Conclusions	4
1.7	The team	4

2: Evaluation of web-based lesson materials

2.1	Evaluation of lesson resources – <i>Anne Sparrowhawk</i>	6
2.2	Analysis of evaluators' views – <i>Anne Sparrowhawk</i>	9
2.3	Commentary on responses at the Education Show – <i>Francis Howlett</i>	13
2.4	Qualitative reviews:	
a	The process – <i>Jane Field</i>	19
b	Interviews with key teachers – <i>Christina Preston</i>	23

3: Teacher issues relating to web resources

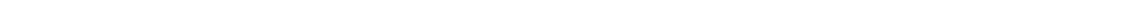
3.1	E-mentoring: helping online education communities – <i>Jane Field</i>	27
3.2	Copyright in e-Lesson resources – <i>Jane Dorner</i>	29
3.3	Survey of teachers' perceptions on copyright issues – <i>Jane Dorner</i>	33

4: Appendices

4.1	TEEM evaluation framework of teacher resources	36
4.2	The evaluation methodology	38
4.3	The questionnaires	40
4.4	Assessed websites	42
4.5	About MirandaNet	46

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April 2001

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1: Summary of the WEBRITTe project

1.1 The brief

The DfEE asked MirandaNet to devise a system for evaluating web-based lesson plans and resources, to co-ordinate the evaluation and to gather around 1,000 web-based resources which could be recommended to teachers, categorised by subject and key stage, with cross-references to the QCA Schemes of Work.

MirandaNet also offered to report on issues associated with web-based teaching resources and to survey results in a variety of ways as preparation for further phases of the project.

1.2 The process

Approximately 80 experienced teachers and advisers evaluated 1,000 resources from community and commercial sites. BECTa initially supplied the bulk of the URLs for evaluation. These were categorised and hyperlinked from the MirandaNet website.

The evaluation teams were carefully briefed and monitored (as described in this report). They assessed websites, according to carefully drawn criteria. Team members checked URL, Title, Producer, Subject, Key Stage, relevance to QCA Schemes of Work and special needs. Reports were then condensed to a 300-character summary.

The same evaluation team used questionnaires to explore perceptions of the value of the Internet as a resource for a wider body of the profession (400 respondents – 100 hours of interviewing). Face-to-face interviews expanded on quantitative findings.

1.3 Results

1. A resource website on the DfEE TeacherNet site presents the outcomes at <http://www.dfee.gov.uk/teachers/resources/>

This incorporates roughly 75% of the sites surveyed and approximately 1000 resources.

2. An e-mentoring service has been set up to support the evaluation project teams.

3. A copyright guidelines report and awareness survey supplements the requirement for authenticity and quality assurance that the pre-pilot identified.

4. Practising teachers commented on selected classroom resources at the Education Show, Birmingham and at the Teachers' International Forum (CAL01) at the University of Warwick during March 2001.

1.4 Overview of main survey findings

- Teachers mostly access the web in their own time and at their own cost from home.
- A significant number of teachers stay on after school to use the school facilities. Such facilities vary considerably in their technical sophistication.
- The consultative model is viewed favourably – teachers welcome a two-way dialogue with Government. They want to be consulted on the provision of curriculum resources and favour the concept of resources prepared by teachers for teachers.
- All interviewees emphasised the positive thinking and enthusiasm amongst the teachers they interviewed. They were mostly keen to become involved, but needed considerably more time and training.
- Teachers found evaluating web resources to be a valuable professional development learning exercise.
- Several interviewees commented on the problems of assessing the impact of ICT on learning. This was resulting in schools having no real impetus to make ICT central to learning.
- Teachers do not appear to know where to look and how to find particular websites – this reinforces a need for quality-assured resources.
- Materials currently available on the web are very mixed in terms of quality and content. Improved labelling would help teachers to navigate their way through the resources, but at the same time there is a need to develop and implement some sort of quality control that will identify the good materials from the bad.
- A full set of resources in all disciplines would help the NGfL to have impact.
- Teachers want to be able to search for resources by topic as well as national curriculum scheme.
- In primary schools the main delivery model is access to the Internet within a teaching context, either in a classroom or a computer suite. This teaching context means that primary teachers are looking actively for Internet resources that they can share with children. Teachers expect the resources to be interactive and support their subject teaching. Ideally they should be downloadable and reliable. Primary specialists do not seem to want lesson plans as much as secondary teachers.
- At secondary school, feedback suggest two models of working. Where teachers have access to a computer suite or Internet access within the classroom, they are looking for interactive materials that they can use with the class. Where this provision is not available, the sites that are most valued are more informational, and are more likely to be a teacher resource, or a teaching idea. Consistently comments were made about the quality of the teaching ideas. Ideas and lesson plans that reflected clear teaching and learning objectives were universally valued.
- There are tangible benefits to be gained from working in a cross-phase team, face-to-face. Teachers working closely with web designers could generate some useful web-based material within a couple of days.
- Research into the TRE showed it to be a useful tool for publishing and the idea and concept were welcomed. However, it was found to be difficult to navigate and search and the instructions were unclear. As experienced web users the team found the processes involved confusing at times and expressed doubts as to how easy less experienced colleagues would find the process.

1.5 Recommendations

Building a lesson plan resource

- A continuation of the project is already underway in which the team has identified gaps in the coverage of the QCA Schemes of Work and is attempting to find appropriate resources to fill these gaps. Quality assurance of new resources will continue to be crucial to this process. A second phase of the project could be to extend this coverage, including coverage of the numeracy and literacy strategies, and to commission specific resources if suitable existing resources cannot be found for all subjects and phases.
- Reviewers had some reservations about aspects of an estimated third of the resources that are now on the TeacherNet site. Quality would be greatly enhanced if the feedback from the reports were given to originators to enable them to further improve useful idea and lesson plans.
- The full evaluation for each resource should be added to the site.
- Originators (publishers and producers) should be able to interact with the site and indicate when their pages have been updated.
- The developers should improve speed of the TeacherNet search engine.
- The developers should improve navigation on the TeacherNet resource site, e.g. more search terms; framework terms; multiple search by subject and Key Stage; better granularity on KS1/2 or KS3/4 searches (users always get activities from both Key Stages); expand age-range; indicate empty categories before user gets frustrated.
- Recommended sites should not necessarily be linked by default to Schemes of Work because they do not exist in every subject and not every teacher follows them rigidly. Topic searching would help in this context.
- Improvements need to be made to the TRE with regard to design, navigation and searching in order to encourage less experienced users to access it and contribute. Further recommendations are made in a separate report on research carried out by the team on the TRE.

Supporting the resource

- A second phase could include discussions with teachers to find out which resources are the most useful and to commission further resources in line with these findings.
- The 'gateway' from the DfEE site to other official educational sites should be made more obvious to encourage teachers to look at other important sites.
- MirandaNet's pre-pilot has initiated a database of expert teachers which the next phase can build on.
- An e-mentoring service, like the one piloted, would help teachers to feel less isolated and would help to pass on knowledge from the present evaluators to further teams. The DfEE could consider setting up an e-mentoring service on TeacherNet.
- Publication of case studies is an opportunity for further involvement in TeacherNet and would supplement lesson plans and resources.
- The DfEE could support road shows to increase awareness of professional development and copyright issues.

- The DfEE could also commission and produce a cartoon-based booklet on copyright for children.
- The future relies on sponsoring an awareness programme for teachers. For example, an intensive two-day course where teachers could learn how to do things like emailing, surfing the NGfL, searching for lesson plans, etc. This initial training could be followed by tasks to complete with a class, that link into the TeacherNet web resources supporting the QCA recommendations, SATs, standards and effectiveness.
- A seminar for commercial providers has already been discussed. This needs to be initiated so that all commercial companies can be invited to contribute to resources on TeacherNet and link into the searching.

1.6 Conclusions

Responses showed that teachers valued lesson plans as a starting point to spark off ideas of their own. The more open-ended the resource, the more favourably viewed it was.

There was also a recognised need for stand-alone lessons which would be useful for supply cover or periods of absence. Those lesson plans that were identified as valuable in that regard usually had clear and relevant objectives and matched the time available, i.e. could be achieved within a 45-minute lesson. They usually had a printable resource to direct the pupils' work, and could be completed either during the lesson or for homework. This then left an outcome that could be marked either by the supply teacher, or was clearly identifiable as a task for the teacher on return.

The web is also seen as a potentially good source for materials to be used offline by pupils in the lesson, or as online reference material.

Users wanted trustworthy resources with 100% reliability: it was unclear whether paid-for resources offered that guarantee. However, respondents were clear that critiquing and improving existing resources would require substantial funding.

Models of co-operation between teachers and commercial ventures were praised, where teachers are paid for materials developed, which are then edited by advisors, Heads of Departments and then passed onto the designers who have experience in developing web-based resources.

The evaluation process itself provides useful continuing professional development within the education community.

1.7 The team

The project was directed by Christina Preston, Director of MirandaNet and managed by Tanya Keable, PR Consultant and Project Manager.

The evaluation template and rationale was developed by Anne Sparrowhawk, Teachers Evaluating Multimedia (TEEM), and implemented by Francis Howlett, Educational Consultant, who co-ordinated all appraisals.

There were 7 team leaders from the MirandaNet pool of educators who each had about 10 evaluators working with them.

Evaluators included teachers and student teachers from MirandaNet UK SouthEast and MirandaNet UK North, The St Catherine and Shadwell Trust in Wapping, pilot schools working with Ultralab at Anglia Polytechnic University, the Technology Colleges Trust, teacher educators from the Institute of Education, University of London and the University of East London, members of the Association for Science Education, the National Association for the Teaching of English, the Geographical Association, the National Association of Advisers for Computers in Education, and the Association for Information Technology in Teacher Education.

The evaluation teams were able to cover all Key Stages and subject specialisms. The teams were experienced in using the Internet for school and educational purposes and all evaluators included research, accessing Government information, searching for resources, creating classroom resources and supporting classroom teaching among their reasons for using the Internet.

The e-mentoring pilot was devised by Jane Field, Director of Education and Development.

The copyright issues were developed by Jane Dorner, Director of EditorNet and Chair Elect of the Copyright Licensing Agency, who also edited this Report.

2: Evaluation of web-based lesson materials

2.1 Evaluation of lesson resources

Anne Sparrowhawk
TEEM

Context

TEEM was asked to create a framework that would enable classroom teachers, head teachers and other non-classroom-based professionals to evaluate lesson plans and materials published on the web to support classroom activity. This framework was shared via email with teachers and evaluators taking part in the assessment exercise.

In addition, guidance notes and comments were provided to ensure that the users understood the structure of a framework of evaluation as opposed to a questionnaire form (see Appendix 1). The responses indicate that the framework was successful in structuring teachers' comments under the headings of Access, Content and Curriculum Relevance, Design and Navigation, Ease of Use and Conclusion. Teachers were also asked to identify the subject and topic at which the lesson idea was targeted and to confirm their machine specification and any plug-in requirements that the software demanded.

Teacher contributions indicate a number of lessons to be drawn from the process.

- The quality of work produced by the teachers was high.
- The framework created a common format that the majority of evaluations fitted into. It is noticeable that where this framework was amended, the resulting evaluations would seem to be less well structured and less informative.
- There was a considerable variation in the amount different evaluators wrote. Sometimes the increased length was helpful; sometimes it was not. A few of the evaluations might be judged to be too brief, but this was often because the evaluator felt the resource to be inappropriate.

Outcomes of the evaluation process

The majority of the materials evaluated were lesson plans, and some were schemes of work. Some were linked to pupil resources, either printable or to be used online. This disparity of purpose leads to different expectations from teachers which were fulfilled to the full range of the spectrum from identifying excellent materials to those that were a waste of time.

There were few lesson plans that the evaluators felt would not need adapting in some way or other, the reasons being:

- unimaginative resource
- not differentiated by audience or outcome
- did not fit the time slot either suggested or available

Within a primary classroom, the existence of specific equipment available might mean that the teacher would introduce the subject matter of the lesson differently drawing on the resource of a poster, set of materials and so on, thus often invalidating the lesson idea. Primary teachers sometimes referred to elements of the whole as being good and 'pinching' that idea.

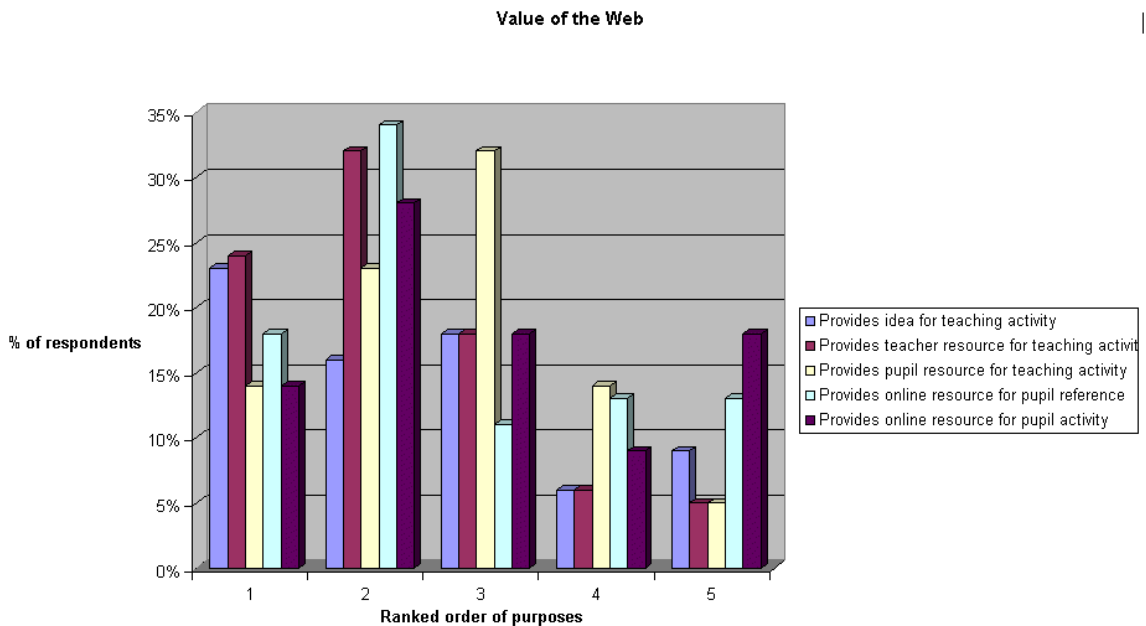
Many of the resources demanded that Acrobat Reader should be available. This is an issue on some networks and within some schools.

There were a number of references to the audience of the website – some lesson plans could be seen as valuable for an NQT as a starting point. Some offered details of activities that might be great ideas as a whole for an experienced teacher to add into what they already do or to offer a little wrinkle of a new idea that they had not previously considered. A number of evaluators identified those stand-alone lessons as offering value as ideas for supply cover or periods of absence. Those lesson plans that were identified as valuable in that regard usually had clear and relevant objectives and matched the time available well, i.e. could be achieved within a 45-minute lesson. They usually had a printable resource available from them that would direct the pupils' work, and could be completed either during the lesson or for homework. This then left an outcome that could be marked either by the supply teacher, or was clearly identifiable as a task for the teacher on return.

The topic term chosen to identify the lesson activity was very variable – there was not a restriction to defined curriculum tasks. This has significant implications for the searching of the data – it is not simply through the reference to QCA schemes of work. This is particularly true for Primary School referencing, where the importance of content – myth / poetry etc may be the teacher's search objective.

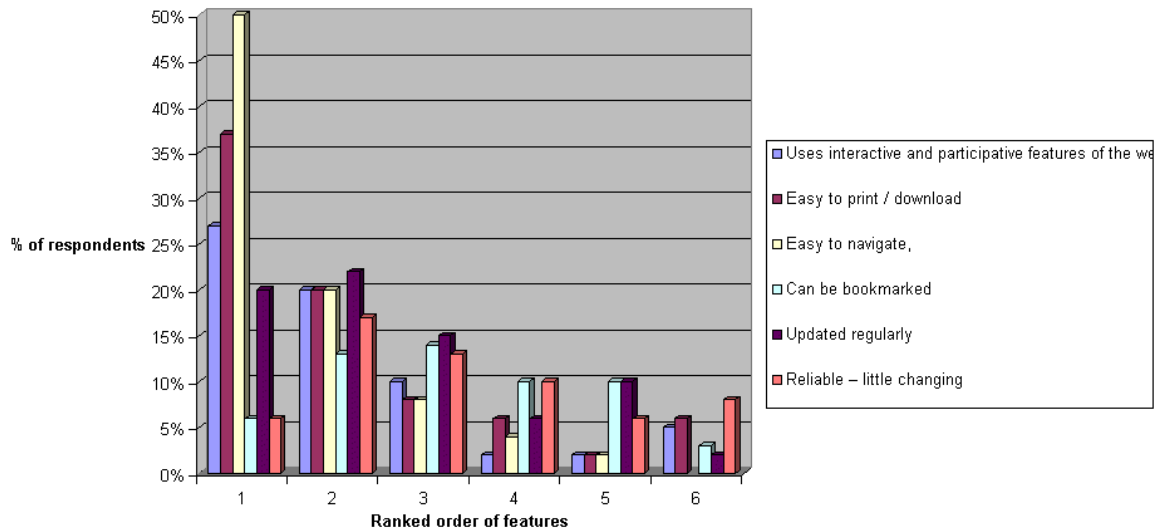
Primary teachers were often looking for children's elements within the lesson materials, and were disappointed if the resource only spoke of the lesson itself.

Primary teachers were also looking for interactive web resources rather than lesson plans alone, and were disappointed when the materials did not offer that.



There were features that the evaluators responded to and referred to regularly through their evaluation. The most important of these from the teacher's viewpoint was the navigation. This makes sense given the concerns expressed about the time available.

Desirable features



Questionnaire responses

Following the evaluators completing their allotted evaluations, they were sent a questionnaire to complete. The results of these follow in 2.2. It is clear from the responses, that there are still many different issues that arise in terms of providing teachers with resources, and the many different requirements they have can perhaps best be illustrated by the series of websites they like and dislike (see Appendix 4.4). Some names appear in both lists, indicating that there is considerable value in teachers being able to read evaluations of websites in order to ensure they go to the site that is best suited to them.

2.2 Analysis of evaluators' views

Anne Sparrowhawk
TEEM

77 questionnaires were returned

Key Stage taught (if appropriate):

KS1	12 responses
KS1-2	5 responses
KS2	19 responses
KS3-4	16 responses
HE / advisory	25 responses

Web access and experience: Outline briefly how you use the web in your daily work or teaching.

At KS1, 50% of the responses were 'for information' or similar. 25% teachers used it in the classroom, and a number made little use of it or did not respond.

At KS2, 60% made reference to classroom resources. 20% saw it as providing information, and 10% made little use of it.

At KS3 and 4, 33% saw it as a classroom resource, research and information accounted for 50% of usage, with the remainder seeing email as most valuable resource.

The HE and advisory group, 40% saw it as a research role, and 25% referred to it as a communications medium.

1. List at least 3 exemplar sites – or particular features of the sites – that you feel are particularly valuable. Also list 3 examples of poor practice. For both elements, refer in particular to the resources audited for the DfEE.

Site address	Good because
A whole range of sites were listed here (see Appendix 4.4a).	Strong user input, wide range of resources, interactive, keeps student records, stimulating to children, good ideas, useful worksheets, games, simple search engine, good range of activities
Site address	Poor because:
There were fewer specific addresses (see Appendix 4.4c).	Unattractive, poor quality information. Difficult to navigate, offered little more than a textbook, nothing original, and already offered by experienced teachers, boring and unstimulating, contrived lesson plans, little of practical value, language and content too advanced for target pupils.

2. Rank your perception of teachers' views on these purposes for using websites. 1 is highest, 5 lowest

Top priority Middle Bottom priority

Provides idea for teaching activity	23%	16%	18%	6%	9%
Provides teacher resource for teaching activity	24%	32%	18%	6%	5%
Provides pupil resource for teaching activity	14%	23%	32%	14%	5%
Provides online resource for pupil reference	18%	34%	11%	13%	13%
Provides online resource for pupil activity	14%	28%	18%	9%	18%

3. What features of websites from this list do you consider to be most important when teachers are looking for resources?

Top priority Middle Bottom priority

Uses interactive and participative features of the web	27%	20%	10%	2%	2%	5%
Easy to print / download	37%	20%	8%	6%	2%	6%
Easy to navigate	50%	20%	8%	4%	2%	
Can be bookmarked	6%	13%	14%	10%	10%	3%
Updated regularly	20%	22%	15%	6%	10%	2%
Reliable – little changing	6%	17%	13%	10%	6%	8%

4. From your experience what do you think commercial resources uniquely offer?

10 teachers did not comment; of those who did, comments ranged from those who saw them as offering a really professionally developed resource with higher quality resources than other sites, to those who saw them as slick and time wasting. The proportions of these answers were approximately equal in number, with a middle ground of those who never used them.

5. Which commercial sites do you use most?

BBC was mentioned by 6, Educate by 4, museum sites by 4, and never/rarely used by 8.

See also Appendix 4.4b

6. If these are sites where a subscription is paid, what is it that justifies that expense?

Detailed links to the curriculum, expertise, good quality ideas, and easy access. There is an expectation that the resources are updated regularly and are good quality. Subscription sites had been visited by only 22% of the respondents, but they still felt able to offer negative comments on them. There were the comments from about 20% of the respondents that the web should be free for educational use.

7. From your experience, which features of Government resources are especially valuable?

Those who responded to this question (52 people) either described the sites as valuable sources of information for the schemes of work, recent documentation, links, .PDF files useful in OFSTED reports, GCSE specifications. In addition, 2 mentioned chat sites where can exchange views with other people.

8. Which Government sites do you use most?

	Respondents
QCA	20
DfEE	30
Standards	8
OFSTED	14
NGfL	10
BECTa	3
VTC	3
TTA	2

9. Significant financial resources are being put into web developments. What should such developments include to encourage teachers to use web resources more widely?

There were many general answers to this question, including free phone lines, funding for hardware, especially for individual teacher use. 10 respondents mentioned the need to train and guide teachers on what is needed or available, as well as better linking to schemes of work and practical guidelines. Quality of resource was mentioned by 30 of the teachers.

10. What do you believe would encourage your school (or schools in general where you are not school based) to use web resources more?

Of the 52 responses to this question, 26 made reference to time / resource issues. Access is clearly still an issue for many. More equipment, more time, and more relevant content, especially for Foundation and Key Stage 1 were seen as essential by 35% of teachers. There was a repetition of the need to access the web over a period of time to become familiar with its resources. Consistency of approach of resources was also seen as a goal by 10% so that wherever children were in the school similar processes could be carried out.

11. What do you think are the features that make web resources of particular value in a school setting, and perhaps illustrate this answer with advantages a website might offer over other resources (books for example)?

Free and first-hand experience were repeated features through teachers comments. The updated and therefore 'real' nature of the materials presented were really important to at least 50% of the respondents. Home school links were mentioned by a few, as was the considerable benefits of personal research for the children to take individual ownership of the resources. Very significant reference in answer to this question of pupils' use of the web (68% of respondents) which might show a recognition of the use of the web by children outside the school settings.

12. How does the web compare in terms of effectiveness, and appropriateness with other software delivery platforms – CD-ROM or floppy disc for example?

CD-ROMS were seen as more reliable, safer, more likely to deliver what is required within school curriculum by 65% of the respondents, though many talked about the value of the 'currency' of information. The younger the children the clearer the teachers were about the better and safer value of CD-ROMs. A number acknowledged that the situation might be changing, but the prevalence of text based web resources as opposed to the interactivity possible on CD-ROMs suggests that

some of the practical difficulties (losing, scratching, spilling coffee on them, only one machine can use at a time), etc. may still make CD-ROMs worthwhile for the moment.

Are you willing to help write web resources? Do you have colleagues who are willing to help? If so, please add their names and contact details.

27 of the 77 teachers are possibly interested in writing.

2.3 Commentary on 400 responses given by participants at the Education Show

Francis Howlett
Educational Consultant

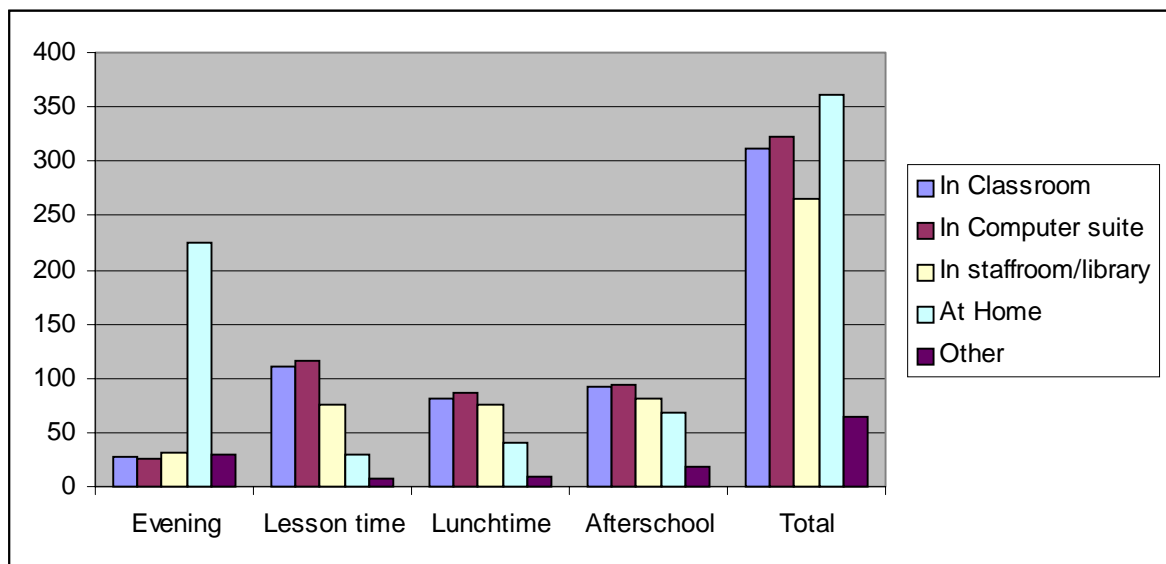
Context

The questionnaire in Appendix 4.3 forms the basis of this analysis. It expands on the analysis in 2.2 above. Answers are probably more representative of the profession as a whole since the sample was not necessarily made up of ICT-using teachers.

In all, some 400 responses were collected – no mean feat when one considers that the majority of visitors to an exhibition such as BETT or the Education Show have very limited time for reflection. The quality of the responses was generally good, despite the inevitable anomalies, and there is a strong impression that the participants were sufficiently motivated by their quick look at the site to give honest and useful feedback.

The first 5 questions had numeric feedback, which is given in full in the attached spreadsheet, and displayed pictorially here for ease of interpretation.

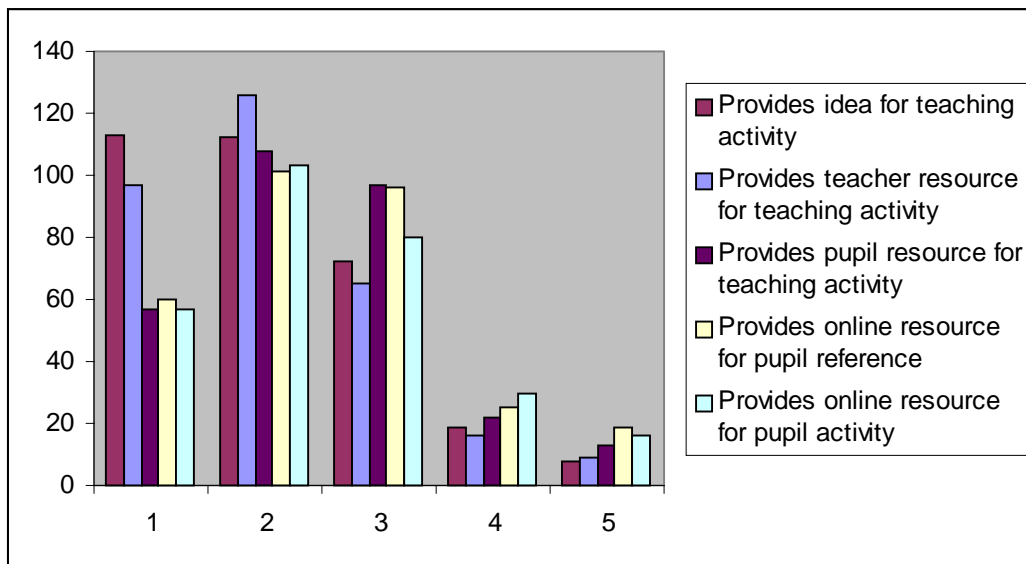
Web access and experience-location and timing



The respondents accessed more-or-less equally from the classroom, the computer suite, the staff room (or library) and from home, and in the appropriate locations depending on the time of day. One category of response doesn't make sense unless an interpretation is placed on the data: how can teachers access the web at home in the lesson time? Let us assume the answers are genuine, and interpret this as meaning that teachers often access their lesson materials from home.

The conclusion to draw from the data is that teachers access the web to a very large extent in their own time and at their own cost from home. A significant number of teachers stay on after school to use the school facilities. There is good evidence of ICT in the classroom as well as in the computer suite.

Based on the materials you have seen at the site, rank your views on these purposes for using websites (1 = high, 5 = low)

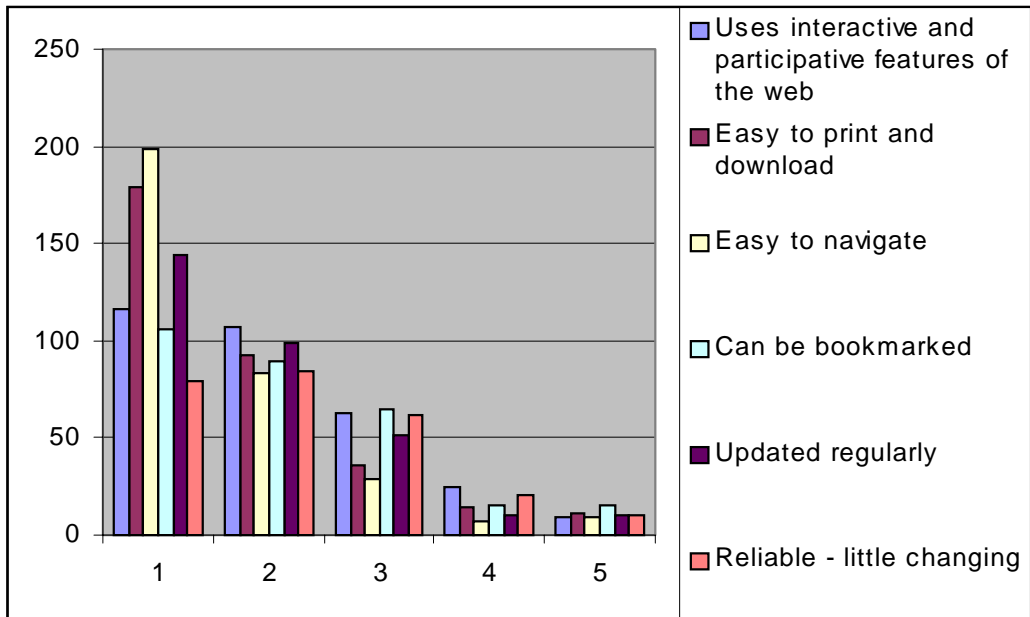


The question is asking respondents to rank the purposes for using websites, based on their experience of having been shown one or two web-based resources. The vast majority of these responses are for the medium to high ratings, indicating on the whole a positive attitude from the respondents to the use of web-based materials.

The data suggests that teachers' primary use of the web will be to find resources which provide either ideas or actual teaching resources. The web is also seen as a good source (or potentially good source) for materials to be used offline by pupils in the lesson, or as online reference material, or even for the pupils to use online. These last two categories received the highest number (albeit rather low) of negative responses.

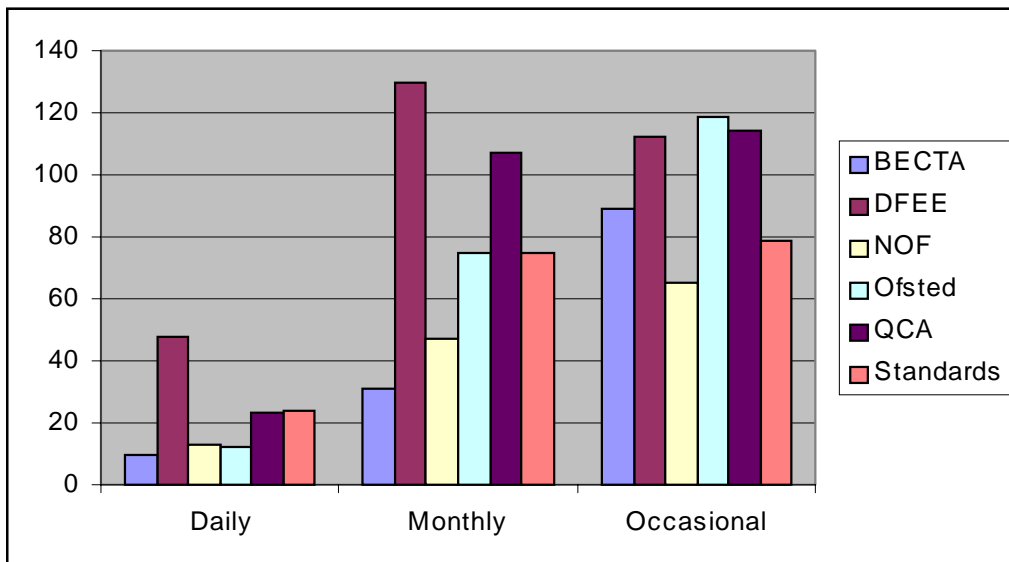
The web is thus seen as a good source of resources, but there is a slight hint that teachers don't (yet) view the web as a source for pupil resources, particularly for pupils working online.

What features of websites from the list do you consider to be most important when looking for resources? (1 = high, 5 = low)



This is very useful data: ease of navigation is the most important feature of a site, closely followed by ease of printing off or downloading. Regular updates are important, but reliability (which includes the feature that the site doesn't keep changing; this is not a contradiction) is also important. Interactive features come out high, too.

Circle the official sites that you use. How often do you use them?



This is just a snapshot, but if it is representative of teachers as a whole then there are many teachers who go on line on a daily basis and look at official sites. In general, the DfEE is the commonest site to visit – perhaps the 'gateway' from this site to other official educational sites should be made more obvious, because this looks like a good way of getting teachers to look at other important sites. The QCA, no doubt because of its Schemes of Work, is also a frequently visited site.

With hindsight, it is a pity we did not ask specifically about the NGfL or the VTC at this point. See also Anne Sparrowhawk's analysis on page 9.

NB: The analysis of Questions 1-4 covered all 400 returns. Only half the verbatim returns for Questions 5-7 were available at the time for analysis.

Please also note that these comments were typed up from the teachers' verbatim hand-written comments by temporary staff who almost certainly had no idea of what they were typing, and so some of the interesting interpretations remain a mystery.

Which 3 commercial sites do you most value?

See details of sites in Appendix 4.4b.

Most of the teachers filled in the form without guidance from the staff on the stand, and so these answers are unprompted sites that were at the forefront of the respondents' minds. Despite the fact that the majority of the respondents misinterpreted the question (which was about commercial sites) and gave instead the three sites they valued most, there is much to draw from these answers.

Teachers will gather information from wherever it is to be mined. There are some surprising sites listed here – Easyjet and First Direct, for instance! Unless these teachers were thinking of their salary and their holiday, perhaps we should look more often at the non-educational commercial sites for the wealth of information that they offer. Sainsbury (not mentioned), Boots and Cadbury, for instance, all have overtly educational sites which are worth exploring.

The BBC has the highest profile of any single Website offering resources, but the DfEE and its sister sites are also very high up in the teachers' minds.

The site known variously as SchoolsNet, Educate the Children, Teacher Zone and Educate, appears to be the most popular of the sites offering extensive resources for practising teachers, and its quality was borne out in the MirandaNet reviews.

Do you use any subscription or closed sites? If so please name. What do you see as the main value of the subscription site?

These respondents *do* use subscription sites, with *value* of named site *in italics*

Yes: AMAER: *focused information*

Yes: Anglia: *none*

Yes: artschool.com

Yes: ATL

Yes: Amazon, BOL: *books etc at reduced prices, delivery at home*

Yes: Channel 4 learning: *no value!*

Yes: Deputy Heads Group: *Keeping in touch with other DH's*

Yes: Edu web (4): *Resources (3), worksheets activity ideas*

Yes: History online: *range of new ideas and resources*

Yes: Nasen

Yes: New Materials: *relevant to age*

Yes: Operational research society: *the subscriptions paid allow the service to be improved*

Yes: RM living Library: *teaching resources*

Yes: Think.com

These respondents did not name any subscription sites, but mentioned a perceived *value*.

Cheap and easy access (2)

Constantly updated (4), relevant and informative

Good mapped content (4) and firewall (1 presume this latter is a reference to the school's ISP)

Money and teacher time. Sharing good ideas/practice

*To give me what I need when I need it and be easily differentiated
Very little*

These respondents do not use a closed site (but some gave the *value* anyhow).

No (51)

No: *Easy access for ideas, resources. Time saving in preparing lesson*

No: *To be a support to teaching to supplement and share good ideas with others*

No: *Access to better materials; no pupil access e.g. confidential data*

No: *Relevant material offering great variety to suit individual pupil needs*

No: *Not evaluated*

No: *People with money* (possibly the only cynical comment in all the replies)

There are a few negative comments here, but by and large teachers see some value in closed sites (with or without a subscription). Over a quarter of the respondents do not access such a site, and others don't name their favoured site; however, there were still several who gave the potential value of closed sites.

Above all, teachers look to such sites for a constant flow of relevant and useful information and ideas, for the possibility of sharing ideas, and for ease of access and navigation.

What do you believe would encourage your school (or schools in general where you are not school based) to use web resources more?

Access – this includes cheaper or free access, as well as access to the equipment

Access: cheaper or free access (8)

Dedicated finance for web access

Access to computers by staff and/or pupils (10)

Broad band (1) and faster access: (15)

Easier navigation and access to information: (6)

Time (14). No contact time in school in which to browse

No point in having info about the national literacy strategy I want resources at my fingertips

DfEE site not user friendly Difficult to find what you need

I find it difficult to find specific publications on the DfEE site

A comments or suggestions/bulletin page for site users to suggest improvements.

Equipment and hardware resources

A lot more funding in schools especially primary.

More resources including more computers (and more funding): (22)

Computers which work, not RM

Support for home use by teachers - extension of the laptop for teachers scheme

Interactive whiteboards (2)

It is already well used. If one had more facilities it would be used more. Reasonable need for access is important and a good filter.

More computers in more classrooms. Access is limited by hardware constraints

Training

Training: (11)

Mentoring and e-mentoring: (10)

Can there be a chat room for teachers to pass on their ideas

Making information about sites more available (9)

Representatives coming into school or publishers reps to show website etc.

More technical help and information (4)

Pooling of ideas and developing lesson plans and policies (2)

Each teacher needs to develop their own directory of useful sites. Sites need to be evaluated and teachers provided with this information. NOF training should help to spread awareness of sites in categories suitable for the key stages and subject specialties available for evaluating web pages etc sites.

SEN

More special needs information

Ability for sites to read out loud written information

More interesting settings, e.g. colours, etc.

There is a great lack of materials for adults with special education needs

There is little or nothing for special needs except basic literacy; special needs require over-learning i.e. plenty of repetition; very little on time for SPLD

The website should provide help for teachers who work in colleges for disabled people.

Teaching resources

Very limited A-level science material available.

Materials connected to practicals which are difficult to do because of health and safety issues (Science). Lessons differentiated in terms of task; lesson plans should address differentiation and behaviour as well as numeracy and literacy and KAL etc

LEA more pro-active in providing facilities for schools in LEA to be on-line. LEA providing advisors and support for its schools.

Easy to use, visual, relevant resources (3)

Appropriate sites for computer literate young children who demand high quality.

We're in transition as a profession; we're taking ourselves out of the frame and it's at risk.

These comments by and large speak for themselves. If they are to use web-based resources, teachers need easy, fast, free or cheap access; they need equipment; they need training on the use of such resources; they need knowledge about what is available; they need time to develop their capabilities and time to use the resources. But they want to do this and do it better – they want to share resources and ideas, they want mentoring.

There is an enormous well of good-will and willingness in the teaching profession; they seem to be saying 'Give us the equipment, the access and the time, and we'll knuckle down and give you back far more.'

From my experience, if the teachers who reviewed the web resources for the first phase of this project are typical of the profession, this is eminently true.

2.4 Qualitative reviews: The process

Jane Field
Education and Development

Context

The 7 team leaders and key players contributed to this qualitative review of the work described in this Report. In particular:

- the use and appropriateness of web-based materials for teachers
- further data of use to the DfEE
- wider thoughts about the web resources under scrutiny

This additional information complements other reports from the WEBRITTe Project.

General feedback

The overall view expressed by the team was that the web resources were of very mixed quality, content and style.

There was a view that better labelling or indication of when to use the resources would have been useful. Many of the resources appeared to the reviewers to be warm-up activities, a sub-lesson, ideas to try, or 'hints to rejuvenate the jaded teacher'. Some of these were good, but the purpose should have been more clearly defined. Conversely, others met all the criteria of what constitutes a good site, including download times, ease of navigation, clarity and content. Some offered very lengthy schemes covering a term's work with information, hints, materials, links, ideas for assessment, follow up ideas, etc. This led to the comment by one reviewer that such resources were 'almost bordering in the 'too good' – where's the space for the individual teacher's input?'. The better sites also had signposts to National Curriculum Key Stages and Schemes of work.

There was a feeling that generally the resources were neither as interesting nor as useful as they appeared to be initially. The reviewers felt that too many were 'of no use', and that at times the full resource was only apparent once it was downloaded. The exceptions were very good indeed and one or two actually exploited the properties of the medium well and were 'inspirational'.

The biggest disappointment seemed to be that the resources were lacking in invention. The resources were on the web, rather than resources which *used* the web. Some of the materials looked exactly the same as a text page from a book, or a paper handout. The creators seemed to have forgotten to consider the opportunities for exploitation offered by multi-media. One of the team also commented that 'no one described the good and bad aspects of their resource – they just presented it "as is"'.

Good practice identified

There was a consensus as to what works well as a web-based resource for teachers. The list below would be a useful checklist for anyone considering publishing resources for teachers on the web:

- describe what the resource is for
- provide key words showing content

- provide clear navigation links that work
- reference the resource to National Curriculum Key Stages and Schemes of work
- make use of the media opportunities available, i.e. develop Internet resources that actually use the Internet – with links to explore, trails, further resources, sounds and pictures etc.
- offer content that is exciting and interactive
- should be able to download the resource
- promote a sense of individual involvement, whether by teacher or student
- give the access to resource, but allow the teacher to tailor the resource to their own requirements
- generate the work sheets
- well illustrated examples
- ease of access
- not too 'flash'
- preference for short chunks with links, rather than a long text that goes on for pages, without using interactive opportunities.
- a 'series' of materials for a particular topic, not a lot of 'one-offs'
- very full plans with copious resources – not everyone, particularly in primary schools, is an expert in all aspects of all subjects, and some of these resources were inspirational as well as educational.
- constant review and updating, rather than a static library of materials available on the web.

All web-based resources should consider the difference between book and screen, and make use of the multi-media and interactive opportunities offered by using web-based resources.

Good resources make use of obvious shapes and symbols; they allow the user to go back and forward, they make use of frames with links down the side so that the user can see where to go back a screen and where they have been. Good navigation tools are consistent, using a consistent style throughout the site. Unfortunately, it needs to be said that good navigation links should be relevant to the topic and ones that link to up-to-date information. Some navigation links explored during the review were out of date or irrelevant to the topic. This is another example of the need for the web-based publisher needs to keep on top of current developments and review and update the site on a regular basis. One reviewer suggested that 'a third party might need to create the links as a writer will not necessarily have access to all or many useful links'.

Unsuccessful web practice

The reviewers identified the sort of web-based materials that will not work well for teachers.

- anything that requires long download time – costly and frustrating
- sites consisting of just pages of text are wasted on the web; it is much easier to use text off-screen rather than on
- resources for teaching practical skills – video resources (apart from very short clips) tend not to be effective
- inadequate referencing, which makes it more difficult for teachers to identify the most relevant materials

- unclear navigational links – should be clear when a hyperlink is a hyperlink. It is unprofessional to expect a teacher to have to hover around the page
- sites that require logon and password requirements to browse the site

Other comments could equally be applied to traditional resource materials, e.g. worksheets with no context or meaning; lesson plans that make assumptions (e.g. 'Use circle time to ...') and pages of text without illustrations to support the content.

There was a feeling that many teachers used search facilities inefficiently. Many teachers are thought to use the wrong search engines. Experience has found that the most useful search engines for teachers and pupils are Google, Copernic (which lets you search, save and amend).

Teachers need to consider the subject or topic, the Key stage or assessment criteria, and the topic, aims or goals.

Prescriptive vs non-prescriptive resources

Some teachers like prescriptive resources, which clearly explain how to use the resource in such a way as to meet certain criteria, based on certain evidence. The reviewers were concerned about the idea of teachers downloading material and using it in the classroom without their own personal input. As one reviewer put it: 'The content is always negotiated (or should be) by the teacher concerned. The thought of children sitting down completing mile after mile of worksheets printed from .PDF files is hard to bear. The worst examples are where the teacher has simply been a conduit for delivering sub-standard, boring resources from books or the web'.

Continuing Professional Development (CPD)

In practice teachers and schools need fast connections. Some argue that Broadband access makes life so much easier. Consideration needs to be given to the 'what happens if' ... all pupils in the school are logging on or all teachers are accessing the web after four o'clock.

In CPD, as in using web-based resources for lessons, people will keep going back and refining. In practice there is little review or evaluation of materials; but if the web-based resources do not add value there will be a decreasing interest in accessing web-based resources.

CPD opportunities should be accessible to teachers at all levels: i.e. departmental, whole school, LEA in-service, self-study packs, CD-ROM and web based materials.

Media rich material takes too long to download (e.g. stream video, sound files), which implies a need for simple, easy to access and download materials.

One reviewer commented that CPD should enable 'Teachers to go off on tangents, to develop their own expertise. It is also useful to have background information available so you feel you have a good foundation for teaching'.

Interest was expressed in CPD support through such structures as e-mentoring. Where teachers could look to 'experts' who had tried and tested the use of web-based materials in the classroom, or who could recommend useful sites (see separate report on e-mentoring on page 27).

Motivating teachers to use web-based resources

The reviewers suggested a number of ideas:

- Seeing other people use it successfully.
- Top down model – where head teachers are IT-friendly and prepared to commit resources (e.g. technicians and training)

- When they see a point to it, when it looks like it will make their life easier and help them to deal with the current level of demand and expectation
- Web resources should be available particularly at levels or areas in which teachers have problems using traditional materials

It was also noted by one reviewer that 'Being involved in the WEBRITTe evaluation involved us in finding some good new sites'.

Web-based materials development

The reviewers all felt that teachers should be involved in the development of web-based teacher resources. This was modified by many, who felt that teachers should work in partnership with web designers, people with technical know-how, or joint ventures, where the teacher provides the creative ideas, and the professional provides the web expertise. It was felt that relatively few teachers have the experience or time to master new web-building software.

Various models of co-operation between teachers and commercial ventures were offered, for example the ACTIS model, where teachers are paid for materials developed, which are then edited by advisors, Heads of Departments and then passed onto the designers who have the experience in developing web-based resources.

The reviewers were adamant that in the case of teacher / commercial partnerships that the company should recognise and pay teachers for their professional input. Almost all the reviewers thought that ideally teachers would be asked for their professional input in terms of need and content.

The review also identified concern about the lack of quality controls for web-based teaching resources. This is an ongoing issue; in recent years several projects have sought to develop quality control guidelines for educational materials on the web. Currently there is not a quality standard that can be adapted to web-based materials, and as such it is up to the individual teacher to identify and evaluate what is useful, and what is not.

The reviewers also suggested that commercial companies would do best by working in partnership with teachers in order to produce quality web-based materials that would meet an educational need in the classroom.

It was suggested by one reviewer that companies should: listen, focus on pedagogic content not just presentation, and then focus on the development of capability not just skills. This suggestion was further developed by another reviewer who thought that

'not many teachers have the time to develop their often excellent ideas from a good local resource into something which can be picked up by others. I saw several resources which might have been fine in the school where they were developed, but which were useless outside that context without a lot of adaptation. These would be better as case studies – then at least one can accept them for what they are. This is where commercial firms can add so much value to teacher resources, turning them into generic resources'.

It was felt that the commercial software developers can add in the design and layout features, check on additional resources and links, professionalise the illustrations, address copyright issues, and check the spelling and grammar etc. However, teachers should be recognised and paid for their ideas.

In contrast, there were reviewers who felt that all web-based resources for schools should be available free of charge; which may make it difficult for small commercial companies to have any significant input.

2.4 Qualitative reviews: Interviews with key teachers

Christina Preston
MirandaNet

Context

The 10 teachers, advisors and teacher educators on the stand at the Education Show recorded their impressions. In particular:

- the usefulness of web resources
- what they had learnt from evaluating web resources by teachers
- their experience of demonstrating web resources and interviewing their peers

The interviewees were encouraged to mention any change in their own professional opinions during this process. In the light of their extensive use of the TeacherNet site, they were asked to comment on navigation and search tools and on provision for their subject areas.

This section of the report expands on the analysis in 2.3, giving direct quotations as a back-up to the data gathered.

This work reveals a great deal of interesting anecdotal evidence which could form the basis of further research in Phase 2.

Action research ethos

More than three quarters of the team leaders and some of the team members were established Fellows in MirandaNet, an international not-for-profit organisation for educators, industry partners and Government representatives who have devised a corporate philosophy about ICT professional development over the last 10 years (see Appendix 4.5).

Marketing and public relations

The DfEE project was viewed favourably and the interviewees thought that there was a shared sense of purpose amongst them generated by both the short timescale and the fact of being valued seriously enough to be paid for the work.

Interviewees enjoyed representing the DfEE and found it empowering to be able to say to other teachers that the DfEE wanted to know what they thought about things and that their opinion would be listened to. The approach of the DfEE project personnel was also appreciated. These two views are typical:

'I was very impressed with the way in which DfEE personnel contributed to this, and the fact that they listened to our observations. I am sure that this will be as true for Phase 2.'

'It is only through my involvement in this project that I have begun to think about the learning potential of web resources. Previously, it was not something that had crossed my mind. It feels great to have an opinion that is valued and listened to.'

The interviewees emphasised the positive thinking and enthusiasm amongst the teachers they interviewed at a time of low morale. They were mostly keen to become involved given the time and, for many, the training.

‘It really important to grab these teachers and give them all the help, support and encouragement we can, so that they can show the way to their more reticent colleagues.’

One commented that the vast majority of teachers are good learners although they are battered from the constant changes and continual adjustments of the curriculum.

The same interviewer noted that many of the teachers interviewed had already invested in their own PCs but were reluctant to use PCs with pupils because these are not readily available or reliable. He also thought that the benefits from pupil success using computers are still doubted. Several interviewers commented on the problems of assessing the impact of ICT on learning. This was resulting in schools having no real impetus to make ICT central to learning.

Motivation

The majority of the interviewers found that their peers considered the Internet to be motivating for teachers as well as children.

One reason suggested by an interviewer is that a web browser is not as complicated as other software packages. Anyone can get involved quickly and with minimum technical interference. One teacher educator observed that teachers seemed to quickly become adept at the various plug-ins and associated issues.

‘They jump the technical hurdles more quickly than they do when learning about any other kind of software because of the perceived benefits. There is something intrinsically motivating about this level of engagement with the web. There appears to be a sense of empathy. Maybe it’s also to do with the fact that resources by teachers for teachers rekindle a sense of altruism and community (rightly, wrongly, naively?).’

Another interviewer observed that there was a broad range of educators who were interested in web resources. It estimated that about 50% were Heads and Deputies, about 10% were classroom assistants who have no managerial role and others he noted were peripatetic teachers involved in Special Education.

The interviewers also unidentified a number of teachers who showed their own specialist sites or mentioned that they were in the process of setting up their own websites. Interviewers were impressed by the quality of these resources in Science, PE and Design and Technology. Their names have been recorded so that these teachers can be involved in further population of the TeacherNet Grid.

Resources on the NGfL

The majority of the interviewers applauded the range and richness of many of the web resources that they discovered. On the other hand these educators also commented on the weakness of some of the resources on the NGfL. Several repeated the same concern.

‘I felt that there was far too much conventional textbook work dressed up to appeal online.’

Not enough interactivity was found in the materials evaluated and hardly any encouragement to use the NGfL as a tool to transform teaching.

‘The big step for teachers is not using a PC to write worksheets but have pupils using PCs as tools for learning all subjects.’

Websites in general

Teachers do not appear to know where to look and how to find particular websites – this reinforces a need for quality-assured resources. Observations included:

- Teachers rely on computer to remember URLs because they are too complicated to recall
- Time is limited for computer use and so teachers tend to give up if site is not found quickly
- Too often site is not available in school time
- No page for Early Years and Foundation Stage
- Regardless of whether you want KS 1 or 2 you will always get activities from both Key Stages
- Regardless of whether you want KS 3 or 4 you will always get activities from both Key Stages

Models of ICT professional development

Amongst the interviewees were ICT teacher educators and advisers who had clear ideas about the best ways to teach teachers as well as teachers who were new to advising their peers,

One interviewer quoted Doug Brown's talk at CAL 01 when he suggested that continuing professional development should be aiming to create 'conscious competents' not 'conscious incompetents'. The National Opportunity Fund from the Lottery was thought to be addressing teachers' skills and competencies up to a point, but most of the interviewees thought that skills and competences were not the central point.

Another interviewer summed up this view:

'Many teachers have developed their own use of word-processing and some graphics to "publish" worksheets, overheads and so on. This is useful but very time consuming and essentially reinforces existing paper-based learning. Perhaps the reason for this is that very few teaching rooms yet have PCs readily available for teachers or students to use. Where there are not enough computers for a class, teachers are reluctant to individualise learning to the extent needed to make effective use of the more likely number of just 2 or 3 PCs in a room.'

Risk taking is not easy because there is still an anti 'progressive' atmosphere in some schools which tends to look down on individualised learning and reinforce teacher led whole class teaching. This is a real deterrent to experimenting with the Government agenda for transforming teaching and reduces innovation in learning styles.

Effective continuing profession development should allow teachers to take risks and to reflect on the reality of the changes ahead.

Most of the interviewees put their emphasis on the practical use of ICT as a way forward. This depends on personal access to computers which is increasing because of school and Government purchase schemes.

There was concern that many teachers regard ICT professional development as an addition to their workload, rather than a step forward, and something that can help them. A project like the TeacherNet web resource evaluation could help to change that view. A repeated observation was the value of this web resource evaluation as a means of continuing professional development. On leader commented that in his review team, it became clear that looking at the resources both separately and together encouraged professional dialogue about content and pedagogy and a better consensus about what aims and learning objectives colleagues were working towards.

'You sensed that looking at the web would now be part of the teacher's normal practice when looking for and preparing teaching material.'

One interviewer thought that some of the most resistant teachers would be engaged if there was a high level national debate at a philosophical level about the purpose of education in relation to the impact of ICT. There is still confusion amongst the

profession, as there is in industry and in Government, about education terms like classical humanism, reconstructionism, instrumentalism, progressivism and tradition teaching. There should be a more honest debate about what kind of mix of the avant-garde and the traditional society expects teachers to promote in schools. Who 'selects from the culture' that which should be taught and learned? And what will the classroom of the next ten years look like? Teachers are only reflecting the confusion in society about what education should be.

Being involved in the evaluation of web based resources by teachers for teachers was a unanimously positive experience for the interviewing team. One of the interviewers encapsulated the general attitude to the demonstrating and interviewing experience.

'I learned a great amount from talking to others involved in education who have different experiences from me.'

Building a teacher knowledge-bank

Some of the interviewers had a longer-term understanding of the NGfL resources. Others were looking forward to expanding their knowledge through projects such as this one.

'It is refreshing to do something different. I have enjoyed this style of working. I'd like to do more.'

One teacher explained the benefits she had seen growing over the last two years.

'Since the changes in Government funding for schools, many teachers including myself began to feel isolated, especially in our own subject areas. It was difficult to find out what was deemed as good classroom practice. As many schools became competitive and knowledge became a resource people were not willing to share. However in the last two years, web resources became a very useful tool in developing and supporting me in a specific area of my subject, electronics, which I had to deliver in the classroom. It was reassuring that there was material out there that I could access and tap.'

Another interviewer who had little previous experience of web resources summarised the effect on her learning:

'The need to be open minded in teaching and ready to learn from one another continues to be necessary in taking learning forward. It was, therefore a positive learning experience for me to be involved in presenting evaluated websites to other professionals. It made me focus on the positive features of the various sites and reinforced for me the way these really can be used to support teachers, whatever their level of ICT knowledge.'

Paradoxically, their learning came from teaching teachers. Several other comments backed up this point.

'I feel much more confident in searching for other web resources myself after showing other teachers.'

These expressions of confidence must be helpful to a profession which has low self-esteem and point up the value of a project such as this one.

3: Teacher issues relating to web resources

3.1 E-mentoring: making a contribution to online education communities

Jane Field
Education and Development

Context

During the past year a small team of e-mentors – comprising classroom teachers, a special needs teacher, a head and a deputy head, LEA representatives and others with experience across lifelong learning – have been developing an e-mentoring service for teachers. This has been developed on <<http://www.think.com>>, the secure web-based environment developed and built by Oracle for pupils and teachers.

Teachers can make a 'contribution' to the e-mentoring community on any aspect of ICT or online education communities. Using a group of e-mentors (rather than the more traditional mentoring partnership involving two people) ensures that the input from the e-mentors offers a wide perspective and range of ideas in response to all the contributions made on the e-mentoring community. Furthermore, evidence shows that the e-mentors not only offer new ideas to the contributors (mentees), but that they 'spark-off' each other, encouraging further reflection and suggestions. The wider viewpoint and the broad discussions offered by the e-mentor group approach ensure that the contributor is not locked into the view of any one individual. This provides teachers with the chance to look at issues relating to ICT more widely; which, due to staffing pressures and the need to be in the classroom, many are unable to do (e.g. through personal networking or conference attendance) at the present time.

Benefits of e-mentoring

The emphasis of e-mentoring is on collaboration – sharing ideas and expertise. e-mentoring offers a democratic approach to problem-solving; the e-mentoring group approach offers the potential for creative thinking (further stimulated by the cross-fertilisation across job-boundaries) and can help to encourage lateral thinking.

Even when paying e-mentors (and their schools) and the e-mentoring facilitator an honorarium, e-mentoring is cost-effective; and can be accessed by any teacher, whatever their location. e-mentoring provides new opportunities of flexibility that can be built into support systems and networks. Time constraints, some degree of anonymity and the opportunity to reflect before entering into the dialogue make e-mentoring an attractive proposition for teachers in the current educational climate.

Furthermore, the written record of e-mentoring conversations, provide an additional information resource, which is not possible using traditional mentoring approaches. Furthermore, within the think.com e-mentoring community, anonymous summaries of the e-mentoring conversations are placed onto public websites and communities; which cascades the information to other teachers.

There are disadvantages of e-mentoring, not least the fact that some people are reluctant to enter into conversations online, and that entering an e-mentoring community may give rise to perceptions that the individual is in need of support.

However, e-mentoring can break down feelings of isolation and contribute effectively to professional development. One of the reasons behind the development of the e-mentoring community on think.com was due to the increasing lack of opportunities (often due to work pressures) for teachers to get out of the classroom to attend conferences or engage in formal or informal networking.

The think.com e-mentoring review showed that the fact that there is not a personal, face-to-face relationship does not seem to affect the e-mentoring process. Perhaps, as there is a lack of signals (such as body language) the e-mentors are careful to explain what they mean, and avoid making contentious remarks, although none of the e-mentors felt constrained by the medium.

Using e-mentoring to support WEBRITTe

During the WEBRITTe Project an online mentoring service was established. However, given the time frame in which the initial project was undertaken there was little time to be able to actively pursue the e-mentoring potential. However, an online induction package for new mentors was developed, which could be used in future development work.

14% of the respondents to the TEEM evaluation emphasised the need to train and guide teachers on what is needed to effectively use materials or to identify what is available on the web.

In the qualitative review of WEBRITTe, involving surveys with the team leaders, the use of e-mentoring to support teachers use of web resources was welcomed.

Comments included:

- e-mentoring could be offered at a number of levels, departmental, school and LEA. Teachers need access to expertise.
- e-mentoring could possibly be accessed by teachers wanting to ask questions on how to try different bits of the curriculum, either as peers or 'ask an expert'.
- Someone who will go to an e-mentoring site already has some commitment and a notional awareness – the other question is how to move people forward in the first place.

The qualitative review also asked how teachers could be motivated to access web-based resources. Responses included:

'Teachers will become interested and motivated to use web-based learning resources by being able easily to find things that are new, "work" (i.e. have been tried by other teachers), and target areas that they have difficulty in teaching.'

Watching peers (trail-blazers) and seeing the direct benefit to themselves can start to motivate teachers, at this stage they will begin to adopt the technology.

IT-friendly head teachers, with zeal, who are prepared to commit resources (i.e. technicians and training) would contribute to motivating teachers.

Using e-mentoring to support teachers accessing and using web-based materials may provide the motivational and support element that has been identified as necessary by those involved in the WEBRITTe Project.

3.2 Copyright in e-Lesson resources: a guide to teachers using web-based learning materials

Jane Dorner
EditorNet

Context

This document is vital to an understanding of use of web-based resources. Not all lesson plans are in the public domain. Therefore teachers need to be copyright-aware.

It is in plain, ordinary language and addressed to teachers. That means it is only for guidance. It is not the full picture, because it has to be in the legal language for that. If it *is* in legal language, ordinary teachers find it hard to understand. So make sure there is a person familiar with copyright in your school to check any point of confusion.

Respect for copyright is vital for learning growth. It is the cornerstone of a creative society and the means by which individuals are acknowledged and paid for their work.

Though the system has many oddities (and is hard to enforce on the Internet) the interdependency between educators, pupils and content-providers is worth preserving. Creators contribute to the scholarship of this country and if they are not fairly rewarded education will be intellectually the poorer.

The law seeks to give fair solutions to all parties.

Web-specific issues

Quite a lot of material has been put on the web without the permission of the copyright owners. You should therefore be cautious about using any material on the web, although if the site is hosted by someone you trust, it is probably reasonable to assume that the material has been put on the site with permission.

In using lesson plans or educational materials from the web, always look for, and read, the copyright notices on the site and make sure you abide by them. The notices will probably allow teachers and educators to use content for non-profit educational purposes only.

If there is no copyright notice, and it is a site hosted by someone you trust, you can probably assume it is OK to download exercises or lessons for use in your own school or college. You should not assume that a commercial use will permit use, though, and it is always safer not to exceed the uses in the next section. The safest option is to email the owner of the site and ask. Generally, permission will be granted for educational uses.

Encourage students to be wary of illegal sites, look for copyright notices and ask for permission – they will understand the principles of copyright better if they are involved in it. Encourage them to put only their own material or material for which they have permission on their own sites and to include copyright notices of their own.

The copyright of the lesson plans probably belongs to the educational authority which employs the teacher who posted them up. This is not, however, clear cut. Where a teacher has created lesson plans and a website in personal time, not associated with the lessons they teach, the copyright may belong to the teacher. Individuals should check their contracts of employment.

Hyperlinking has some grey areas of uncertainty. It is almost always acceptable to link to a site's front page. But links to inside pages or links to a page or image on the

linked site that appears to the reader to be part of your page are best not done without permission. It's best to open up another browser window for linked sites or include a notice telling viewers they are leaving your site. Other educational sites are, however, mostly eager to establish mutual linking. See

<<http://www.cla.co.uk/copyrightvillage/internet.html>>

If you know or suspect that a site linked to yours includes material that is illegal in any way, such as it is defamatory or infringes copyright, you should break the link immediately, otherwise you could be liable too. You always need to think carefully about what you link to. See <<http://www.twobirds.com/library/internet/disc.htm>>

Make sure you keep adequate records of where material has come from, how you have used it and so on in case you are ever challenged by copyright owners and have to show that you have tried to be compliant.

<<http://www.bodley.ox.ac.uk/scoping/appi.html>>

Software code is also copyrighted as literary works, so students should not 'borrow' JavaScript or other interactive coding from other sites. There are plenty of free resources where owners have made their code freely available. See <<http://www.cgi-resources.com>>

The laws of copyright apply to the Internet exactly as they do to print. For links to many other useful sites and copyright and IP FAQ, see the Government-backed home of UK Intellectual Property on the Internet

<<http://www.intellectual-property.gov.uk>>

General – permitted use of copyright materials

A teacher can write up a poem or piece of writing on a blackboard or whiteboard or an overhead projector. The students can make their own versions of these copies by writing, painting, typing and so on. But you *can't* photocopy, scan, digitise or copy onto acetate transparencies or any other way of using a reprographic process to copy from the printed source.

You can use material without permission for setting examination questions.

You can use Crown Copyright National Curriculum literacy and numeracy materials without permission. More information is at <<http://www.hmso.gov.uk/guides.htm>>

Teachers can produce drama in school with pupils and teachers in the audience. But as soon as parents are invited in, it becomes a performance and the school may have to get permission.

Where there is no licence available, teachers can copy broadcast material but copying is now mostly covered by licences so teachers need a licence from The Educational Recording Agency to record or video material off-air to use for educational purposes.

<<http://www.era.org.uk>>

Teachers (or pupils) can usually make single photocopies of short extracts (e.g. *single* paper copies of one article from a journal or a reasonable portion of a book (not more than 5%) or a literary, dramatic, musical or artistic work or a database, for research or private study. But, where multiple copies are to be made, or even where more than one student in a class wants to make the same photocopy because the teacher has suggested this, the school should have a blanket licence for photocopying *any* published material from the Copyright Licensing Agency and should observe the conditions that apply.

<<http://www.cla.co.uk>>

A short extract of a work could be used with acknowledgement for the purposes of criticism and review. See further explanation of permitted uses at:

<http://www.intellectual-property.gov.uk/std/faq/copyright/ex_education.htm>

See also <<http://www.licensing-copyright.org>> and the licensing agencies below.

Agencies for clearing copyright

Text

The Copyright Licensing Agency (CLA) licenses the photocopying of extracts from books, journals and magazines.

CLA Ltd, 90 Tottenham Court Road, London W1P 0LP

tel: 020 7631 5555

<<http://www.cla.co.uk>>

The Newspaper Licensing Agency Ltd (NLA) licenses photocopying from *some* newspapers

NLA, Tunbridge Wells TN1 1NL United Kingdom

tel: 01892 525273

<<http://www.nla.co.uk>>

Christian Copyright Licensing (Europe) Ltd (CCLI) licenses the reproduction of hymns and songs used in school assemblies. CCLI can license reproduction of lyrics and music by hand, type, computer storage, photocopying, acetate usage, and can permit arrangements of the music (where no published version exists).

CCLI, Chantry House, 22 Upperton Road, Eastbourne BN21 1BF

tel: 01323 417711

<<http://www.ccli.co.uk>>

Broadcasting and TV

The Educational Recording Agency (ERA) licenses educational establishments to record radio and television broadcast and cable programmes for educational purposes.

ERA Ltd, New Premier House, 150 Southampton Row, London WC1B 5AL

tel: 020 7837 3222

<<http://www.era.org.uk>>

The Open University Worldwide licenses recording of Open University programmes.

The Open University, PO Box 200, Milton Keynes MK7 6YZ

tel: 01908 653231

<<http://www.ouw.co.uk>>

Music

Phonographic Performance Ltd represents the UK record industry, licensing the use of sound recordings (CDs, tapes, discs etc.) on behalf of record companies and performers.

PPL, 1 Upper James Street, London W1R 3GH

tel: 020 7534 1155

<<http://www.ppluk.com>>

The Performing Rights Society (PRS) is an association of composers and publishers of music. It licenses the extra-curricular use of copyright music on school premises, including PTA events and use by hirers.

PRS, 29/33 Berners St, London W1P 4AA

tel: 020 7580 5544

<<http://www.prs.co.uk>>

The Music Publishers' Association (MPA). A licence must be obtained from the relevant publisher to photocopy sheet music or to perform a musical.

MPA, 3rd Floor, Strandgate, 18/20 York Buildings, London, WC2N 6JU

tel: 020 7839 7779

<<http://www.mpaonline.org.uk>>

Artistic works

The Design and Artists Copyright Society Limited (DACS) is the copyright and collecting society for visual artists in the UK. You need a licence for showing slides and copying pictures (some print copying usages are part of the CLA licence).

Parchment House, 13 Northburgh Street, London, EC1V 0AH

tel: 020 7336 8811

<<http://www.dacs.co.uk>>

Acknowledgements

Sources for this document are the publications and websites of the organisations quoted, plus:

the British Computer Society and NAACE joint publication 'Promoting Responsible Use of the Internet in Schools' (BCS, 1999).

A briefing paper on Copyright and the Internet for Schools prepared by Taylor Vintners Solicitors (undated)

For more information on copyright, go to:

<<http://www.intellectual-property.gov.uk>>

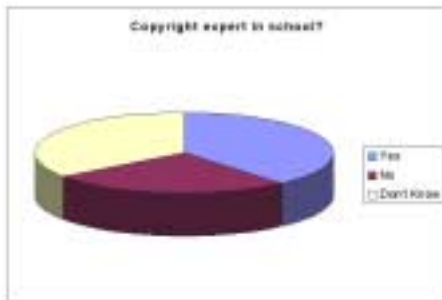
Many thanks to Judith Sullivan at The Patent Office and to Carol Lee for reading and commenting on the points in this document.

3.3 e-Copyright Survey

Jane Dorner
EditorNet

There were 114 replies. Respondents were asked to answer questions honestly.

1. Is there a copyright expert in your school to whom you can go for advice?



Y	39%
Don't know	35%
N	26%

Comment: This result shows a need for wider circulation of copyright awareness amongst educationalists.

2. Does your school have blanket licences to:

copy from books, newspapers and magazines for circulation in class;

show slides of pictures or photos;

relay videos and broadcasts;

play CDs?

Don't know	36%
Y to a) mixed on rest	32%
N to all	32%

Comment: Virtually all schools have a CLA licence and most have an ERA licence. The uncertainty about this reflected here is likely to be typical.

3. Does any licence permit you to scan from print so you have copies you can show on a screen?

Don't know	54%
N	27%
Y	18%
N/A	1%

Comment: There is at present no scanning licence so this is an interesting result.

4. Would you normally expect to print out anything from any web page you like?

Y	82%
N	17%
Don't know	1%

Comment: One or two respondents qualified their answers by saying 'yes' if it was for private study. None said they would not make multiple copies or would not print more than a small percentage of a website.

5. Are students allowed to copy-and-paste anything from a web page into a document of their own?

Y	40%
N	39%
Don't know	17%
N/A	4%

Comment: Some respondents offered qualifications for the circumstances under which this would be allowed (e.g. if sources quoted). As with scanning, there is no existing licence that permits copy-and-paste.

6. When you hyperlink to another site on the web, do you have to ask permission?

N	56%
Don't know	34%
Y	10%

Comment: Hyperlinking has some grey areas of uncertainty. It is almost always acceptable to link to a site's front page. But links that appear to the reader to be part of your page are best not done without permission.

7. If a school child creates materials to post up on a website, whose permission do you need to get?

Don't know	40%
Parent	25%
Teacher/school	17%
Child	13%
N/A	5%

Comment: Parents should sign agreement forms.

8. When you use web teaching resources, do you always take a note of the full URL of the source?

Y	43%
N	35%
Sometimes	22%

Comment: Some said they did if it was for publication or if wanted to find it again (also might bookmark)

9. Do you normally read the copyright notices on websites you plan to use for educational purposes?

N	53%
Y	43%
Sometimes	4%

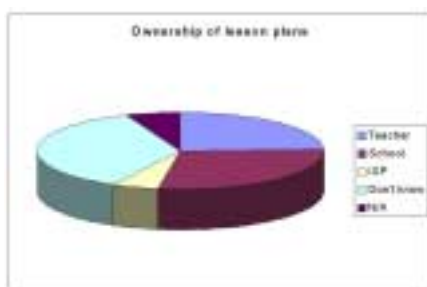
Comment: An honest result.

10. Do you forward educationally interesting emails to other colleagues?

Y	56%
N	39%
Don't know	5%

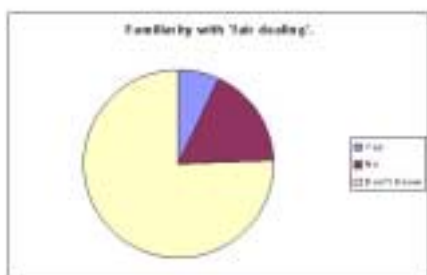
Comment: Emails belong to the person who wrote them and should technically not be forwarded without permission.

11. Who owns any lesson plans that you, as a teacher, post up on a website?



Don't know	37%
Inst. or school	28%
I do	25%
ISP	6%
N/A	4%

Comment: Some respondents realised that the answer here is dependent on the contract of employment. It is highly likely that the school would claim ownership.



12. What do understand by the term 'fair dealing'?

Don't know	77%
Reply but wrong	18%
Good reply	5%

Comment: This was a purposely loosely-phrased question and the result reinforces a need for more copyright education in schools.

Many of the 'don't knows' said they'd never heard the term.

Conclusion

These results are unsurprising and bear out anecdotal evidence that teachers and educators need more support in this complex and confusing area. The fact that these replies came from team leaders who are in the forefront of understanding the implications of technology in general – and the use of online learning materials in particular – suggests a real need for copyright education at all levels.

Recommendation

The DfEE could support road shows in schools to air the issues. It is important to do this in an engaging and friendly manner that constructively shows how education and culture depends on mutual respect amongst those who produce materials and those who use them.

The DfEE could also commission and produce a cartoon-based booklet for children.

4: Appendices

Appendix 4.1: TEEM evaluation framework of teacher resources

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Outline for evaluators

ID Ref (or range of Refs if part of a series):

Title:

URL:

Publisher: As given on the site

Subject(s): In which this material might be useful

Key Stage(s): For which this material might be useful

Topic(s): Within a subject for which this material might be useful

Scheme of Work Unit(s): Try to identify the Unit or Units of the QCA Scheme of Work that this resource will support

Special needs categories: For which this material might be useful

Machine used (Processor type, RAM size, speed of CD-ROM, setting of monitor, specification of on-line link if appropriate)

Name of Evaluator: Your name

School / Organisation

1. ACCESS

Were you able to access the site reliably, on a number of occasions?

Was the access speed acceptable?

2. CONTENT & CURRICULUM RELEVANCE

Which subject areas does this title support?

Which teaching objectives does this title support?

Which learning objectives does this title support?

What are the strong features of this activity for classroom use?

Where would this activity be best suited within the school context?

What would teachers need to know in order to use this product effectively?

What prior experiences would the pupils need to have had – where does the material fit within a scheme of work?

Does the resource offer opportunities for differentiation for the brighter as well as less able pupil?

Which curriculum topics will it support? Is it a single lesson idea or activity, or is it linked as part of a set?

Is the classroom information appropriate to classrooms of the target age group and does it give enough information about the activities suggested?

Are the ideas presented appropriate to good practice?

Are there any resources provided for use with pupils? If there are, were they useful, and did they enhance the use of the software within the classroom?

Is the extent of the content appropriate for the target audience?

Is the presence of web advertising appropriate on the site?

Is the information structured to support learning e.g. in topics or as groups of exercises of equivalent items, as a succession of developing ideas, as opposed to randomly linked material?

Are there underlying values it reflects? Green issues, British views, gender, ethnicity.

Does the title contain material which may be morally or ethically unsuitable for some groups? If so give details.

3. DESIGN and NAVIGATION

Are there any elements of the design and navigation of the site that get in the way of its use either by teachers or within the classroom?

The following questions may help frame your thinking.

Does the model of the interface support the subject it is teaching?

Does the software support the learner, e.g. by providing a tutorial or a structure for access?

Can you get in and out to the section you want easily; can you bookmark where you've been, or record an individual users place so that they can restart where they left off?

Do the search facilities enable you to find the information you want?

If the material is in part for children:

Is the language and product style appropriate for the Key Stage it is supporting?

Can the program be used by children alone or only with an adult?

Can the program be used by children alone if they have an introduction by an adult, or are given a structured task?

Is the title suitable for use by individuals, pairs, small groups?

Are the search facilities provided suitable for the target age range?

Do any links from the site take you to a logical extension of the resource you were using?

4. EASE OF USE

Can a teacher or child use the software with minimal help?

Is it clear how you move around the product?

Is the vocabulary in the menus accessible to children?

Supporting documentation

Is the documentation clearly separated into elements that deal with running the software, and those that deal with classroom practice?

5. CONCLUSION Give a summary, in not more than 150 words, of the title's fitness for purpose.

Appendix 4.2: Evaluation Methodology

Christina Preston
Director of MirandaNet

Anne Sparrowhawk
Director of TEEM

The project summary

Since 1998 the Government has invested some £1.8 billion in the National Grid for Learning and NOF teacher training with the aim of helping teachers use ICT to raise standards and to transform teaching and learning. The MirandaNet Fellowship in collaboration with TeacherNet at the Department for Education developed this project to increase teachers' awareness of the National Grid for Learning resources, to promote ownership of this new medium and to consult with teachers by peer review.

This pre-pilot includes a celebration of teachers' existing work on the web and continuing resource development by teachers for teachers. A team of nearly 80 expert practitioners have been involved in the audit and the selection of exemplars of good practice.

These expert practitioners interviewed delegates at the Education Show, Birmingham and at The Teachers' International Forum (CAL01) at the University of Warwick by asking opinions about a range of selected web resources which will be shown. The data collected will provide information on teachers' use of web sites, preferred web resources, their classroom needs and their opinions on navigation and search techniques. Some delegates were invited to answer questions about their knowledge of copyright. Those respondents wishing to be further involved in this DfEE TeacherNet project were encouraged to register their interest with the team.

The expert teams have been using an evaluation template developed by Teachers Evaluating Multimedia (TEEM). During the evaluation period the team leaders have received training and ongoing mentoring to ensure that the evaluation process is consistent across the teams. A range of issues have been covered during this training which will form the basis of qualitative input to the final report.

The team will continue to populate the TeacherNet National Curriculum Grid during April and to write resources to fill gaps identified by teachers. An e-mentoring service has been set up to support the ten evaluation project teams and their leaders during the evaluation and writing process. This online environment and face to face meetings will be used to debate some of the issues raised in the survey in more depth. Some of the issues under review are explained in the section below which outlines the principles underlying the evaluation framework. Summaries of these qualitative debates are on pages 19-26.

The evaluating teams

Approximately 80 expert practitioners have been selected from professional organisations to evaluate a subset of 1,000 resources from Government and commercially owned sites. The 10 teams have been drawn from teacher communities representing all phases and subject areas. The professional community members included The St Catherine and Shadwell Trust in Wapping, MirandaNet UK SouthEast and MirandaNet UK Yorkshire, pilot schools working with Ultralab at Anglia Polytechnic University, the Technology Colleges Trust, teacher educators from the Institute of Education, University of London and the University of East London, members of the Association for Science Education, the National Association for the Teaching of English, the Geographical Association, the National Association of

The evaluation framework

TEEM's experience of developing a software evaluation model has identified that a framework of evaluation is the most effective way of referring to a range of different materials, and ensuring that comparing the written evaluation enables the reader to best identify resources appropriate to his or her needs. Through the use of this common framework, disparate materials can be evaluated and compared.

In constructing the framework TEEM has attempted to produce a single document that will relate to a wide range of different educational resources. The framework includes a range of questions and issues under the headings known to be significant when evaluating software. Some of the questions may be redundant when it comes to writing about particular materials. However, whatever the software, the purpose of the framework is the same. It is a document that presents a number of headings under which teachers report on their findings and experience of a site, and offers prompting questions that have to be considered when writing about each of the particular issues - access, content, design and navigation and so on. In writing to the framework, teachers will have developed a sensitivity to the issues relevant to each section, and then write about the title with those issues in mind. This ensures that there is a commonality of information about the evaluated sites enabling appropriate comparison from one evaluation to the other to take place.

The framework also raises a number of issues that are also important about the materials, but which may not be overt in terms of their presentation - ethnic origin of the materials, and the way sexual stereotypes are handled which are of general concern. For example, in a school where there are few children of different ethnic origins it might not matter, from the classroom practice point of view, that all the characters in the software are obviously white. It should, however, be an issue that teachers need to think about in terms of general policy about the way people are represented and is included within the framework. TEEM's experience is that these issues become more significant when children start accessing the Internet, where the publishing process may not have had the rigor that book or CD-ROM publication has demanded. Origins and sources of materials and the likely veracity of the material are issues on which the team has been asked to focus.

TEEM's recommendation for using the framework has been that teachers should read and possibly discuss the framework and its questions, and then use a file with just the headings to evaluate the resources against and to write within. TEEM recommends no more than 2 pages of A4 for a CD-ROM, so for a lesson plan, maybe 1 page would be adequate. Having looked at a range of the materials suggested for evaluation, we have not attempted to split out issues in the evaluation for sites that offer resources and teachers materials from those that just offer lesson ideas. The writing as prompted by the framework can reflect those differences and issues.

Appendix 4.3: Education Show Evaluation Form – March 23-25 2001

Name:

Institution: Key Stage taught (if appropriate):

Email address: Subject (if appropriate):

1. Web access and experience – location and timing.

	Evening	Lesson time	Lunchtime	After school
In classroom	⊖	⊖	⊖	⊖
In computer suite	⊖	⊖	⊖	⊖
In staffroom / library	⊖	⊖	⊖	⊖
At home	⊖	⊖	⊖	⊖
Other				

Time of day you are most likely to access Web for your information?

2. Based on the materials you have seen at the site, rank your views on these purposes for using websites.

	High					Low
Provides idea for teaching activity	1	2	3	4	5	
Provides teacher resource for teaching activity	1	2	3	4	5	
Provides pupil resource for teaching activity	1	2	3	4	5	
Provides online resource for pupil reference	1	2	3	4	5	
Provides online resource for pupil activity	1	2	3	4	5	

3. What features of websites from this list do **you** consider to be most important looking for resources?

	High					Low
Uses interactive and participative features of the web	1	2	3	4	5	
Easy to print / download	1	2	3	4	5	
Easy to navigate	1	2	3	4	5	
Can be bookmarked	1	2	3	4	5	
Updated regularly	1	2	3	4	5	
Reliable – little changing	1	2	3	4	5	

Other significant features:

4. Circle the official sites that you use. How often do you use them?

	Daily	Monthly	Occasionally		Daily	Monthly	Occasionally
BECTa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	OFSTED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DfEE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	QCA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NOF	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Standards and Effectiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others? Please name.

5. Which 3 commercial sites do you most value?

6. Do you use any subscription or closed sites? If so, please name. What do you see as the main value of the subscription site?

7. What do you believe would encourage your school (or schools in general where you are not school-based) to use web resources more?

Appendix 4.4: Assessed websites

As noted down by teachers (consolidated listing from all surveys)

4.4a Recommended educational sites (from the analyses in 2.2 & 2.4a.)

[aardmananimation](#) - good insight into film making

[artchive.com](#) - resources & art work excellent

[askjeeves](#) - good for subject knowledge about new topics

[bbc/education.co.uk](#) - gives good revision guide to relevant modules; wealth of resources & info for whole curriculum; link to primary geni.prog; entertaining presentation for students; [/revisewise](#) - good interactive resource fully supporting KS2 SATs; supported by books, videos & audio tapes - good links & access, navigation

[bgfl.org/bgfl/activities/intranet/teacher/pe/planning_doc_pw/pe_2.PDF](#) - Has extension material, good use of IT

[circuitdiag](#) - electrical symbols & good ideas for electric activities with children

[cleo.ucsm.ac.uk/content/history/riverlunewalk/index](#) - robust, unpretentious exemplar to stimulate pupil multimedia - theme of local walk

[contribute.ngfl.gov.uk/treebrowse](#) - adaptable & provided a ready made Microsoft power point resource

[ebea.co.uk](#) & [www.bized.ac.uk](#) - both with good search tools/well written & easy to understand.

[educate.org.uk](#) - excellent lesson set out as lesson plan referenced to curriculum documents; well written & imaginative lesson plans; useful for a busy teacher; easily navigated, usable sources; clear simple exemplars for teachers in area of common apprehension; lots of resources & easy to use; very good on RE; helpful lesson plans; lots of resources & ease of use, rather better than the official sites;

[teacherzone/numeracy](#) - clear lesson plans & good web connections; well set out, easy to use, elements of good practice

[eduweb](#) - good links to search engines

[filmeducation](#) - provides good resources

[hungersite.com](#) - promotes moral consideration, global citizenship, good graphics.

[imaginelondon.org.uk](#) - exciting curriculum work

[infantexplorers.co.uk](#) - big books, dictionaries on line

[inspirations.com](#) - at the cutting edge of teaching practice

[intermap](#) - resources for teachers & students, linked internationally

[kented.org.uk/ngfl](#) - Kent NGfL; good exemplars of practice/resource

[learnall.net](#) - straightforward to navigate lesson plans on a variety of subject areas; wide range of resources

[literacylessons.co.uk](#) - well set out collection of lesson plans with lively ideas & good practices

[Living library](#) - broken into key stages, subjects & all link together nicely

[Macromedia](#) - strong user input - providing answers to problems

[materialproperties](#) - good ideas for activities with a range of materials

[mathslessons](#) - Clear examples, much use of animation & student interaction

[National Literacy Framework](#) - comprehensive advice

[naturegrid.org/explorer](#) - good, interesting & intelligent; [library.thinkquest.org](#) - good student resource for self-paced physics tutorial including interactive mat - simulations

[northerngrid](#) - useful resources are directly relevant to students & teaching plans easily accessible; good specifically for IT

[Oxfam](#) - excellent material from (although didn't fit the QCA schemes well)

[pathwaysuk.com](#) - curriculum content specific; museums, reading; extensive access to whole of UK; original idea to utilise other websites; easy to navigate & access

[peterrabbit.com](#) - raises teacher expectations of web potential

[primaryresources.co.uk](#) - good ideas & resources; good range of subjects/resources for planning; ideas & resources good

[pugh.co.uk](#) - Accessible info about software

[samlearning](#) - facility for self-ass & recording progress grades

[schoolnet](#) - interactive, instant answers, user friendly; comprehensive online interactive & paper based resource.

[scienceonline/results/conduction](#) - good simulation; [/results/keepingwarm](#) - very clear, easy to use, informative, colourful

[sciencweb.net](#) – information; good for finding information (2)

[scishop.org](#) - online facility for science educators & student to find resources to match specific learning objectives

[sparkisland.com](#) - good cross curricular activities for KS1&2

[spartacus.com](#) - encyclopedia of American history very informative

[standards.dfee.gov.uk/schemes](#) - useful for lesson planning; good links/resources

[Teacher resource exchange](#) - ability of teachers to contribute; discernable quality control

[teachers.net](#) - lots of resources

[teachingideas.com](#) - some simple ideas which would be ideal for NQT's or teachers under training; covers most areas of curriculum; one of very few sites allowing child interactive participation; simple, easy access format; great/simple teaching ideas; teaching ideas; [/tessellation/talkingbook/emailpictures](#) - provide teachers with skills to create good school resources; [/english/willowact](#) - good visual activity proving stimulation for children; [/skeleton](#) - useful worksheets & answers, suggestions for pedagogy

[tes.co.uk/math/java](#) - totally interactive learning

[think.com](#) - superb for keeping up with head teachers info & DfEE thinking from a slightly different perspective

[utc.edu/cpma/weta](#) - brilliant applets;

[witcombe.sbc.edu/ARTH20thcentury](#) - extensive resources

[yahooligans](#) - simple search engine for children

4.4b Subject sorted sites (from the analysis in 2.3)

Search engines: [Altavista](#), [Excite](#), [Ask Jeeves](#), [Copernic](#), [Google](#), [Tripod](#), [Yahoo](#) (3), [Netscape](#), [Northern Light](#)

Non-educational sites selling books: [Amazon](#) (6), [BOL](#)

Non-educational sites not selling but offering information: [Boots](#), [Cadbury](#), [Easyjet](#), [Ordnance Survey](#), [Intermap](#), [Street map](#), [First Direct](#), [Microsoft Clipart](#), [Timberlake Consultants](#)

Commercial sites offering educational content: [Anglia Campus](#), [Eduweb](#) (2), [Sam Learning](#), [Primary Resources](#) (2), [Teaching Ideas](#) (3), [School Zone](#) (7), [educate.org](#)

Non-commercial sites offering educational content: [ICTeachers](#) (3), [Think.com](#), [TEEM](#)

Broadcasters: [BBC](#) (including Bite Size revision and Revise Wise) (15), [Channel 4](#), [History Channel](#), [Discovery](#)

Exam Boards: [Edexcel](#) (2) [OCR](#), [City and Guilds](#)

Local Grids – [BGfL](#) (5), [Dudley](#), [Northants](#), [SLAMnet](#), [LEA](#) (did not mention which LEA)

Government and official sites: [DETR](#) (2), [DfEE](#) (12), [NGfL](#) (3), [OFSTED](#) (3), [QCA](#) (7), [TTA](#) (3), [Standards](#) (3), [Parents](#) (2), [Mathsyear 2000/01](#) (2), [National Statistics Office](#), [Public Records Office](#), [Talking Heads](#) (3), [UCAS](#), [VTC](#)

Subject associations: [ASE](#) (3), [DATA](#) (2), [Ebea](#), [NRICH](#), [Royal Economic Society](#)

Newspapers: [Guardian](#), [TES](#) (3)

School sites: [Ambleside](#), [Loders](#)

Misc: [Goethe Institute](#), [German Government site](#), [Harrypotter.com](#), [kevinsplayroom](#), [teamtalk.com](#), [northpole.com](#), [Click teachers](#) (3), [Electronic Ed](#), [Equals](#), [Justbiz.com](#), [Well Town](#), [www.it41.org](#)

Copyright information: [intellectual-property.gov.uk](#)

4.4c Poorly-rated websites (from the analysis in 2.2)

[bbc.co.uk/education/magashapes](#) - awkward to work, too much under construction

[bgfl.org/bgfl/activities/intranet/teacher/pe/w_ks1_pw/index.htm](#) - this is a series of lessons that could not be done in a classroom setting. No pupil resources

[centre/learnall.net](#) - only one resource at a time

[cleo.ucsm.ac.uk/content/english/riverlunewalk](#) - onscreen resources for classroom but little regard for screen design. Some technical flaws some texts obscure & need explaining; [/content/physicaleduc/orienteer](#) - useful to no-one except student of orienteering, spelling mistakes - smacks of not being checked before being put on web; [/content/maths/area](#) - lack of clarity & stated target audience

[contribute](#) - 2+ hour lessons on one sheet?

[designmuseum.org](#) - too much use of flash

[dome.co.uk](#) - money spent on something silly

[Domesdaybook.co.uk](#) - no access to actual Domesday Entry pages

[Eduweb & Living Library](#) - not clear when site needs subscription

[English & Media](#) - need to pay to access.

[englishresources.co.uk](#) - text based plans or sheets. Little interaction or additional resources

[gcse.com/maths](#) - easy start Algebra is not easy for most students

[kapili.com/physics](#) - nothing but text

[kented.org.uk/ngfl/prigeog/en5/frontpage](#) - linked to old NC objectives, topic now obsolete; [www.as](#) above but [en4](#) & [en2](#) as above

[le.ac.uk/citizenship](#) - little of practical value to teachers

[learnall.net](#) - accessed files tend to print nearly blank pages; only able to have one resource open at once

[Mexedes](#) - too slow

[National Dyslexia Site](#) - very little information

[ngfl.gov.uk](#) - weak access to pupil, boring content

[northerngrid.org](#) - boring looking site, uninteresting to look at; not very imaginative ideas/many requiring additional preparation; no easy way to find where to buy Clicker

& My World software or how much it costs; only able to download 1 lesson; poor resources for literacy hour; some very basic work with no supporting material

[nuffield.org](#) - many problems, browser crashed - unreadable

[nutrition](#) - hard copy more useful

[olywa.net](#) - can access but does not work

[royal.gov.uk/history](#) - boring and dry

[schools.walliteracy](#) - offered little more than textbook; sites poor because they are unattractive & poor quality info

[schoolsnet](#) - complicated text esp. KS3 & examples vague; some language and content too advanced for target group of pupils; too wordy e.g. equations 1 at KS3

[sciencemuseum.co.uk](#) - not child friendly, difficult to find way round

[tacade.com](#) - disappointing not updated frequently

[teachingideas.co.uk](#) - content basic; lacks resources (2); couldn't access link pages/PDF formats; majority of ideas basic & already used; most suitable for NQTs or teachers in training; majority of ideas nothing new & already in use by experienced teachers; some poor worksheets, not child friendly; contains some unsuitable activities; lacks resources/flare/ideas/out of touch; no indication on adaptation, cultural balance; there are no original ideas; [/conductr](#) - few ideas & linked to a bookshop selling materials; [/english/speakingnonsense](#) - idea harmful to children's self esteem; [/ict/graphiceval/workstation](#) - not linked to learning intention; [/easterstory](#) - central idea was boring & unstimulating; [/firstthirdperson](#) - worksheet box ticking, could be more imaginative; [/taking turns](#) - not useful, does not exploit features of web; [/timefiller](#) - weaker resources without illustrations of classroom practice; [/wquilts](#) - boring & basic; [/yoyo](#) - toy is outdated, little value at motivator; [/watchingsnails](#) - very little details about snails - very short

[teacher resource exchange](#) - without Word, the info cannot be accessed

[think.com](#) - complicated to follow, difficult to navigate

[timeforcitizenship.com](#) - contrived lesson plans; little guidance for teachers; brief & simplistic; games do not relate to citizenship

[vam.ac.uk](#) - navigation too swish & slick

[vauxhall.co.uk](#) - static view of traffic jams on M25

[verbswpage](#) - lack of imagination in sentence worksheet

[wirral.mbc.gov/classes/primary](#) - clearly transferred from paper-based document without adaptation, no navigation buttons, no links to other pages

[wwar.com](#) - content weak & commercial

Appendix 4.5: About MirandaNet

MirandaNet is an international fellowship of teachers, teacher-educators, advisors, government agents, university researchers, librarians and industry representatives. Their aim is to enrich lifelong learning using advanced technologies across social, vocational, cultural and political divides.

In collaboration with the Institute of Education, University of London, MirandaNet provides a forum for the agents of change. Education in management of change strategies is seen as a key to success in ensuring that learning communities make full use of government and industry investment in advanced technologies.

Founded in 1992, MirandaNet concentrates on the development of innovative ICT professional development programmes. This sustainable and replicable professional development model depends on peer mentoring, peer review, face-to-face workshops, on-line tutorials and mentoring, on-line conferencing, exchange visits and publication in a variety of media.

Three-quarters of the evaluators in the programme were Fellows of MirandaNet.

This mission statement encapsulates the attitude of the team toward their peers during this evaluation and interviewing process.

***The MirandaNet Fellowship** strives to enrich the professional development of educators who are meeting the challenge of advanced technologies in classrooms and staff rooms. The Fellowship spans national, cultural, commercial and political divides to provide an innovative and inclusive forum for education change managers who are building a continuing professional development knowledge base. Fellows celebrate individual learning patterns through peer e-mentoring and action research strategies. Partnership with the Information and Communications Technology industry is at the heart of the research, development and evaluation processes that underpin and support good practice. Dissemination and publication are central to the Fellowship process.*