

The RM Report on The Internet in Secondary School Education



CONTENTS

INTRODUCTION & SUMMARY

INTRODUCTION	3
SURVEY SUMMARY	3
RECOMMENDATIONS FOR THE NATIONAL GRID FOR LEARNING	4

REPORT FINDINGS

WHAT KIND OF INTERNET ACCESS DO SCHOOLS HAVE?	5
WHO USES IT?	6/7
WHEN DO THEY USE IT?	7
WHAT DO THEY USE IT FOR?	8
WHAT DO THEY THINK OF IT?	9

REPORT CONCLUSIONS

IMPLICATIONS FOR PRIMARY SCHOOLS	10
THE WAY AHEAD	10

INTRODUCTION & SUMMARY

INTRODUCTION



Richard Girling
Chief Executive RM plc

RM supports the National Grid for Learning and will play a leading role in its delivery. Building the National Grid for Learning is an ambitious and positive move, but it will only achieve its objectives if teachers are sufficiently trained, motivated and confident to use these resources.

This report provides an audit on the readiness of our secondary schools to embrace the Government's proposals. It is based on a survey of Internet usage in secondary schools which shows there is a major gap between the reality of computer usage in schools and where policy makers want it to be. Internet use is shown to be limited mainly to IT coordinators in schools and is largely ignored by subject teachers and pupils in the classroom.

Using our 20 years of experience in IT and education, RM has assessed the implication of these survey results for the National Grid for Learning and made a number of positive recommendations regarding its implementation.

Many teachers feel there is a real gap between their knowledge of IT and what they are expected to do in the classroom. Action is needed to tackle this lack of confidence through training and incentives to encourage the adoption of IT by teachers. In addition, the low usage of the Internet in classroom illustrated in this survey shows both the need for more networks with multiple Internet access in schools and more National Curriculum specific content on the Internet.

The Government, and all those involved in the National Grid for Learning, must take a number of urgent steps if its aims are to be achieved. We detail these steps below and believe this report is an important contribution to the current discussion on the priorities for a successful National Grid for Learning.

SURVEY SUMMARY

RM plc, the leading supplier of IT to UK schools, conducted research in the summer of 1997 into the use of the Internet in secondary education. The principal aims were to establish who within schools makes use of the Internet; how it is used; what users think of it; and what conclusions could be drawn from the research in the wider context of IT in education.

Questionnaires were completed by 300 secondary schools across the UK. Local Education Authority (LEA) schools accounted for 59% of the sample, while Grant Maintained and Independent schools made up most of the remainder, with 19% and 16% respectively.

- Nearly half (46%) of secondary schools have only one computer connected to the Internet.
- Only 13% of schools have access to the Internet via a network.
- Between a quarter and a third of schools said that their subject teachers never use the Internet.
- The most frequent use of the Internet by both teachers and pupils is 'outside the timetable'.
- Almost two-thirds (63% of the sample) agree that the Internet is a valuable resource for secondary education.
- Filtering out undesirable information such as access to pornography is seen as key by 78% of respondents.
- 73% of respondents would welcome lower costs for teachers to use the Internet at home.

RECOMMENDATIONS FOR THE NATIONAL GRID FOR LEARNING

These research findings have implications for the priorities the Government sets out for the National Grid for Learning. RM believes a number of practical steps can be taken to address the issues raised in this survey.

- The Government needs to provide longer term funding for IT in schools. Current initiatives provide short term funding focused on hardware, which will not bring IT to the fore in teaching and learning in our schools.
- The Government should ensure that part of the mid-week lottery funding is allocated specifically to IT training for teachers, as well as to other IT areas which will deliver specific benefits.
- More compelling content - Internet information content should be made more appropriate to its use in the classroom. For example, much current content is text-based, and pupils expect and are used to graphic images, Although beyond the scope of the research. RM maintains that the shortage of pupil-friendly content is particularly true at primary level.
- Telecomms providers should offer affordable pricing for a range of telecommunications services, to encourage schools to take up more than a single-line dial-up service for the Internet. Options include fixed rates for unlimited usage or a permanent connection at a more realistic price, and a lower price for primary schools.
- Computers for home use by teachers should be tax deductible. Greater personal use of computers by teachers would boost their confidence with IT, both inside and outside the classroom.
- The software industry would be encouraged to develop better content if the Government allowed publication of the National Curriculum documents on the Web.

REPORT FINDINGS

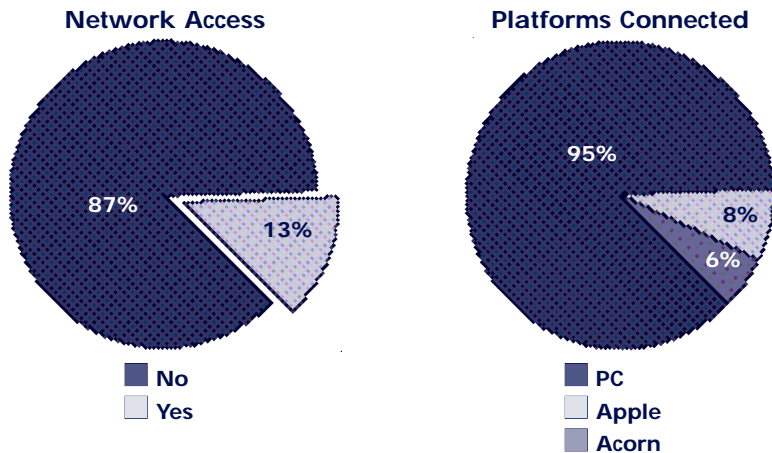
WHAT KIND OF INTERNET ACCESS DO SCHOOLS HAVE?

Most schools - 64% - have been using the Internet for between one and two years. Half of the total sample - 51% - had only one Internet dial-up account.

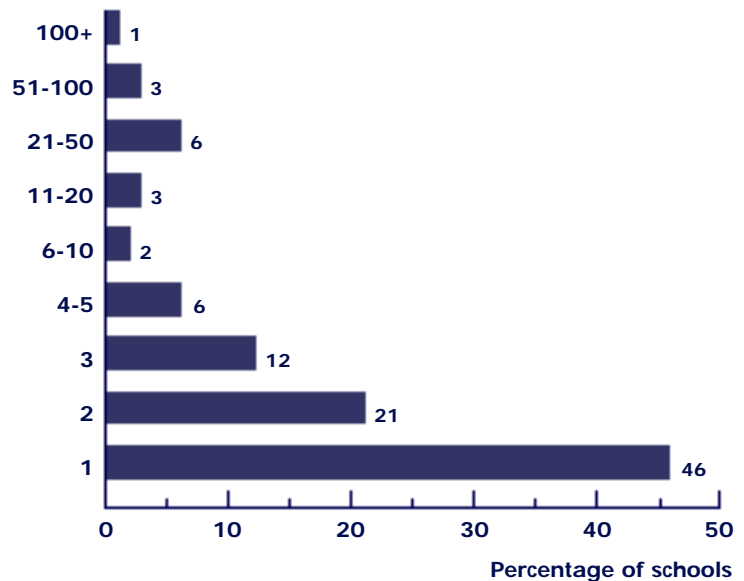
Importantly, nearly half (46%) of secondary schools have only one computer connected to the Internet, and only 13% of sample schools had access to the Internet via a network. To date, RM alone has 300 schools with networked Internet access; by October 1998, this figure is expected to rise to more than 1000.

The vast majority - 95% - of the sample accessed the Internet from PCs, as opposed to other desktop computers such as Apples.

INTERNET ACCESS



Number of Computers Connected



The RM view

These findings highlight the difficulty of using the Internet as a part of regular teaching activity, as single or limited connections do not lend themselves to class-based lessons. This fact was recognised by the sample: 27% of those without networked access claimed they were likely to provide it in the future.

RM believes that networked access to the Internet is a vital first step if the application of IT to teaching and learning in schools is to make any substantial advance. The expected rise from 300 schools now to more than 1000 schools by September 1998 is based to a large extent on the assumption that funds will be made available for network installation - for example, as a result of LEA bids under the Standards Fund. RM is convinced that this assumption should be made a reality.

REPORT FINDINGS

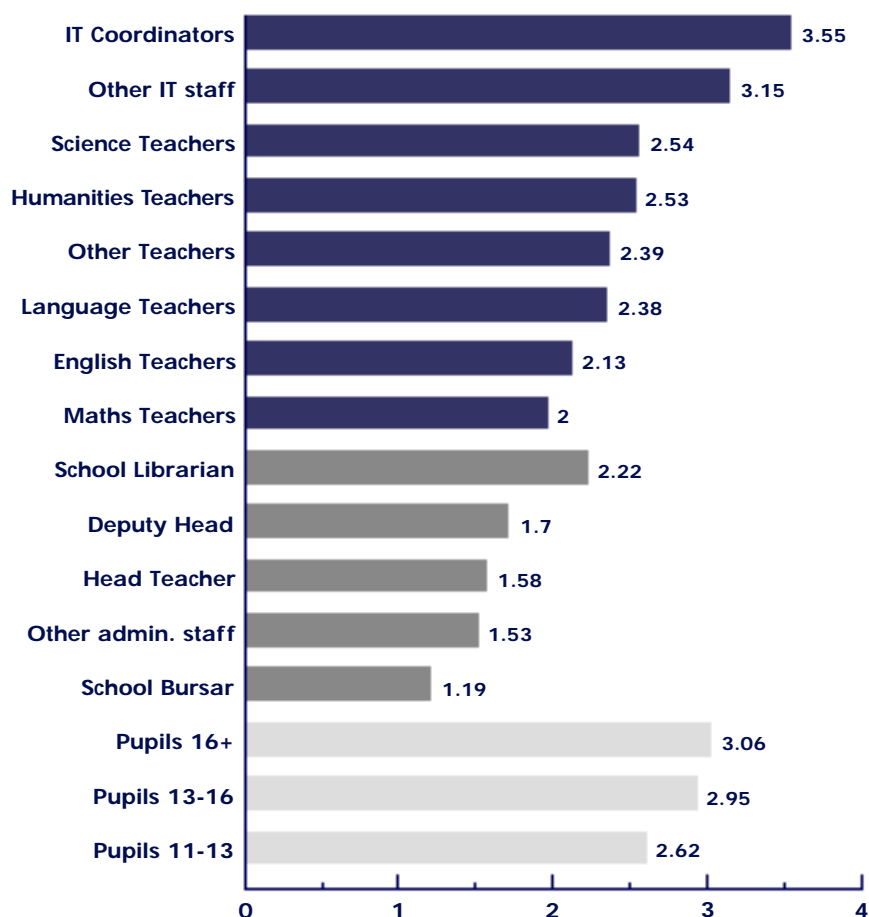
WHO USES IT?

Between a quarter and a third of schools said that their subject teachers never used the Internet. Indeed, in 6% of sample schools, the Internet was not used at all by pupils or teachers (instead, it is probably used for administrative purposes, such as examination results and league tables).

The most frequent users of the Internet were IT coordinators closely followed by pupils (in particular, older pupils).

WHO USES THE INTERNET

Average frequency of use (4 = regularly - 1 = never)



The RM view

In RM's view, based on experience, those subject teachers who are using the Internet can be divided into a few heavy users and a large majority of very occasional users, creating an artificially high statistic. In other words, subject teachers are probably using the Internet far less than the figures suggest. This is most likely because teachers have neither the experience, time nor the motivation to try it out; and this, in turn, is likely to be the result of inadequate networked access to the Internet. If the resources are there, including training, and are adequately supported, subject teachers are far more likely to make use of them.

The fact that IT coordinators, followed by pupils, are the most frequent users of the Internet, indicates that it is still very much in the 'early adopter' phase. Although enthusiastic pupils generally use the Internet outside the classroom e.g. for homework, projects and personal interest research.

RM believes that if the Internet is to be regarded as a valuable medium for educational information, it needs to be endorsed at a senior as well as at a subject level within schools. The individual enthusiasm of IT coordinators alone is unlikely to help integrate Internet usage into the school curriculum and policy.

WHO USES IT?

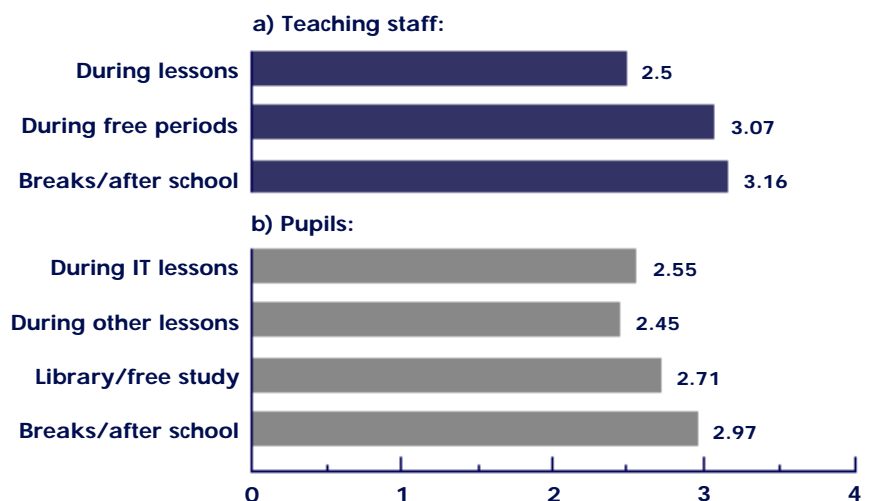
One way of addressing this would be to encourage widespread computer ownership among teachers. Much of teachers' administration work is done at home, usually during weekends and holidays. Tasks such as planning, marking and preparing lessons, and researching subjects mainly take place outside core schools hours.

RM also believes that preferential tax treatment would be a significant incentive to teachers considering spending their own money on a personal computer. Research conducted by RM supports this. If computer purchases for teachers were made tax-deductible, exposure to the Internet at home would be more likely, and would alert them to the possibilities of using it in class - especially if it were backed by properly funded and coordinated training.

WHEN DO THEY USE IT?

The survey showed that the most frequent use of the Internet by both teachers and pupils was 'outside the timetable' - in particular, during school breaks and after school. The second most frequent use was during teachers' free periods and pupils' library time/free study time.

Average frequency of use (4 = regularly - 1 = never)



The RM view

The fact that teachers and pupils are giving their free time to the Internet is an indication of the benefits that they feel can be derived from it, both personally and in general educational terms. However, such users must clearly be regarded as pioneers; it is only when the Internet is used to deliver the curriculum in the classroom that comprehensive teaching and learning benefits will accrue.

REPORT FINDINGS

WHAT DO THEY USE IT FOR?

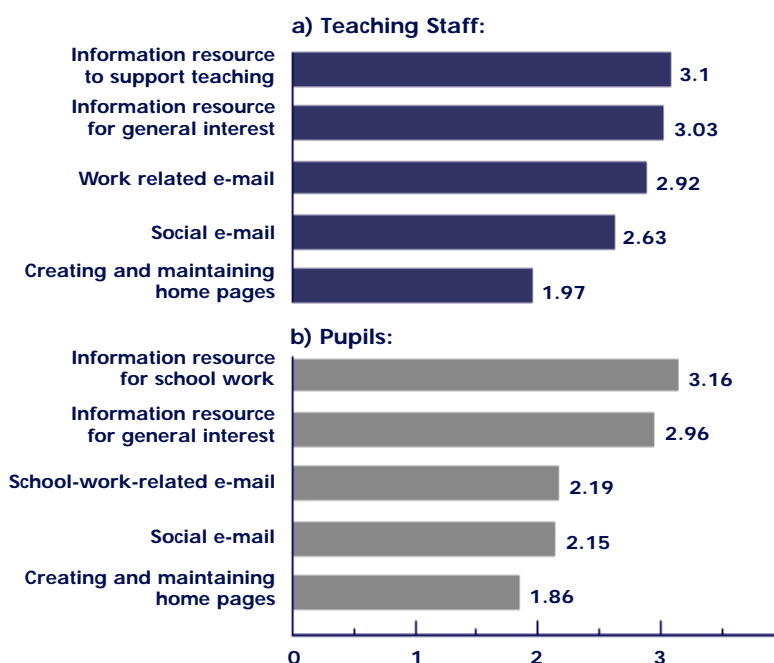
RM's research showed that the most frequent use of the Internet by both teachers and pupils was as an information resource, first for their work and secondly for general interest. However, only 9% of sample schools claimed regular use by pupils in lessons other than IT lessons; and 18% of schools said that the Internet is never used in this way.

E-mailing was more common among teachers than pupils, and in both cases work-related e-mail was more prevalent than social e-mail.

Around a third of the sample schools claimed that their pupils never used the Internet for e-mail.

The least common use of the Internet was for the creation and maintenance of home pages.

Average frequency of use (4 = regularly - 1 = never)



The RM view

RM believes that school e-mail and school websites will become more common once networked Internet access is more widely available. E-mail is a valuable communications medium within a school, between schools and to the outside world. School home pages, or websites, will in time represent a useful marketing tool - they can be seen as the school's 'shop window'.

In the meantime, the most common and current application of the Internet is as an information resource. However, this can only be turned to the educational advantage of pupils if better content is developed which subject teachers regard as bringing added value to their classroom teaching. RM believes one positive way of encouraging the software industry would be for the Government to allow publication of information such as the National Curriculum documents, free of charge on the web. Unlike the United States, in the UK it is very difficult for companies to publish government data.

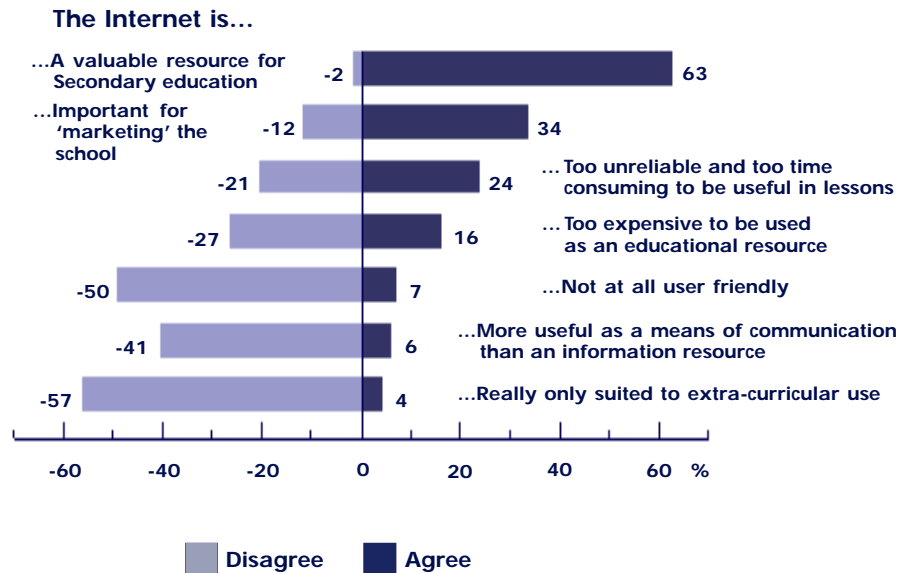
WHAT DO THEY THINK OF IT?

Almost two-thirds of the sample (63%) agreed that the Internet is a valuable resource for secondary education, and very few (7%) agreed that the Internet is “not at all user-friendly”. However, nearly a quarter of respondents (24%) felt that the Internet was too unreliable and too time-consuming to use in lessons, and more than one in six agreed that it is too expensive to use as an educational resource.

The most important feature of school Internet access, highlighted by 78% of respondents, was perceived to be filtering - in other words, the ability to ‘filter out’ access to undesirable websites and information.

Ideas for the development of the Internet in schools which proved most popular included to lower costs for teachers to use the Internet at home (73%).

Rating of Agreement (7 = agree completely - 1 = disagree completely)



The RM view

A number of issues are at work here. Reliability and cost are linked: what is needed is a means of providing cheap telecommunications to schools, ensuring that sufficient bandwidth is available to obviate reliability issues at a price that schools can afford. BT and various cable companies have made a significant gesture in reducing telecomms costs for schools with networked Internet access; and, as the momentum is, or at least ought to be, behind increasing networked access, this kind of industry support will go some way towards addressing these concerns. Restricting access to undesirable material is clearly, and rightly, a major concern. Teachers need reassurance that the Internet can be used educationally and beneficially, without exposing their pupils to corrupting influences. Products which provide this filtering service, such as RM's IFL (Internet for Learning), are proving popular precisely because of this concern.

Teacher guidance on the use of the Internet is also important. The Government has committed mid-week Lottery funding for an increase in IT training at teacher training colleges. RM believes that vigilance is needed to ensure the proper allocation of funds to this task. The company also believes that the training needs of existing teachers can be met at least in part by making teachers' home computer purchases tax-deductible, as discussed elsewhere in this document. The research clearly shows that this would be welcomed by teachers. Of course, there will also be a need for other means of educating teachers on the beneficial use of the Internet, and RM, as a leading supplier of IT to schools, feels that it is incumbent upon itself and other responsible suppliers to provide this education in as unbiased and jargon-free a way as possible.

REPORT CONCLUSIONS

IMPLICATIONS FOR PRIMARY SCHOOLS

RM's research of the Internet in school education extended only as far as secondary schools. However, there is clearly a need for access to the Internet at the primary school level also. Most primary schools only have a single telecom line into their premises and, if they do invest in Internet access, it is likely to be a single-line dial-up service. Telephone and line installation charges can be prohibitive for primary schools, who may have an annual IT budget of less than £1000 per year. Yet it is in this area that there is real potential for sharing resources and benefiting from ideas such as the National Grid for Learning. Only with increased pressure on the telecomms providers to offer a more attractive fee - say, a flat call rate - will primary schools be able to take up the Internet en masse.

An important point also needs to be made about government funding. While the National Grid for Learning and other funding initiatives are highly commendable, much of the money offered has been on a short-term basis, as extra funding for the forthcoming year. Adequate IT provision is not, however, merely a short-term issue: it needs to be planned, prioritised and financed as an ongoing expense. Short-term hardware funding initiatives are not, RM maintains, the way to bring either the Internet in particular or IT in general to the fore in teaching and learning in our schools.

THE WAY AHEAD

This is an extremely important time for IT in education. Even at this early stage, RM has been working in partnership with LEAs, schools and advisors to enable communities to take advantage of the National Grid for Learning. In one project, the Staffordshire Learning Net, RM and BT have worked with the LEA to link all of the county's schools to the Internet - and to set up an Intranet. This project is seen as a possible model for the National Grid for Learning.

Through such partnerships RM has seen IT transform teaching and learning. It believes the future shape of education will be revolutionised through the adoption of these technologies. As this report shows, for this to happen we need to ensure that teachers are well supported, trained and motivated to use the Internet to deliver the National Curriculum.

Around £100 million of additional funding has been pledged to get schools on-line. New initiatives to increase the use of information and communication technologies in schools must be applauded and supported. RM is committed to working with those in education to ensure that the Government's vision of "Connecting the Learning Society" becomes a reality.

January 1998.



Research Machines plc
New Mill House
183 Milton Park
Abingdon
Oxfordshire OX14 4SE

Telephone: (01235) 826000

Fax: (01235) 826999

Internet: <http://www.rmplc.net>