

A virtual teachers centre for virtual teachers?

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Use of the Internet heralds fundamental changes in teaching and learning methodology. But teachers have been deterred from getting on the Internet by technical and financial barriers as well as lack of training and access. These fundamental obstacles are being tackled by this government in 1998.

The government's first priority is the development of a Virtual Teachers' Centre within a National Grid for Learning. The deal with BT and the cable companies is likely to ensure that all schools have cable or telephone connections at about £750 a year; 400 million pounds will be released to equip the schools, libraries and museum; lottery money will be drafted in for teacher education at about £400 a head.

To complete the National Grid for Learning jigsaw, the government has challenged potential service providers to set up competing managed Internet services. The existing services from BT, Research Machines and Microsoft are combining forces. Research Machines' Internet for Learning already provides over 400,000 pages of resources for pupils. BT's Campus World offers over 20,000 pages of content designed to help schools make the most of their Internet connections. (<http://www.campus.bt.com/CampusWorld>). Their Virtual Teachers' Centre will offer basic professional development materials like open forums for teacher debate, review, discussion and self-help; ICT training resources; ICT lesson plans. Research Machines and BT have adopted Microsoft Internet Explorer as their preferred Internet browser, a matter of concern for the Xemplar community if this becomes universal.

Several companies have invested in exploring the network community approach to teaching and learning rather than relying on the downloading of information only. For example, Microsoft, Comtel and ICL have funded the Highdown Information Hub connecting 53 homes of parents, teachers and governors to the school via the Internet. Parents were able to send email to their children at school during the working day, view projects that their children were working on and converse with teachers, opening up learning opportunities by developing a more versatile learning culture. (www.highdown.berks.sch.uk and www.microsoft.com/uk/education)

ICL have invested over 2.5 million with BT and Microsoft in community pilots like Bristol's BEON project now being adopted by Manchester and Newcastle. ICL is also supporting UK NetYear and European NetYear with CISCO and Sun.

Government pumppriming is welcome. But when support is withdrawn the fragmented education market may not sustain a competitive market long term because of low school budgets. For example, currently quality multimedia development in education is not

viable, because development and distribution costs are too high. Several publishing companies are watching to see whether The Learning Grid will cut these costs.

Although the cost of cable and telephone connections, the Internet service provider subscription may still be prohibitive. The BCS Schools Committee estimate that schools will have to find about £2,500 a year. Companies will not be able to go on investing as they have so far if they cannot show profit at this level. Consequently, company consortia are appealing for the government to avoid wasteful duplication of effort at the development stage. Allocating specialised areas of The Learning Grid to different consortia will help keep the costs of providers services low: competitive sites will keep these running costs high.

Most main companies would prefer to be subcontracted to work alongside the approved national sites. One of these is developed by the The National Council for Education Technology which has been tasked by the DfEE to provide government documentation and government funded project information for teachers.

The real benefit for teachers if partnership with companies is pursued should be a lively and cohesive community that can debate, review, publish, socialise and learn on-line. To create this kind of community is teacher-intensive. Outstanding teacher educators and local education advisors are needed to moderate and teach at a distance. This layer of people are essential to make the Learning Grid work. Funding must be provided to pay them. OFSTED, TTA and DfEE officials as well as local authority advisors and teacher educators also need adequate training to lead the profession forward.

Respected researchers into effective computer communicated communications must be consulted like the The Institute of Education, University of London and the Open University who run specialist courses for teachers and lecturers who want to teach on-line. MirandaNet is an independent service which publishes the case studies of teachers who are funded by industry to explore the classroom and staffroom implications of advanced technologies (www.mirandanet.com)

The companies will need the partnership and the support of the teaching profession to survive. Teacher Training Agency ICT accreditation for teachers should be delivered on the Learning Grid. Influential professional bodies like the National Association of Advisers in Computer Education and Local Education Authorities should be resourced to guide their members in the use of appropriate services.

Another potential education host has been generated by the teaching professional itself, TeacherNet UK. This group is an open, independent organisation developed 'with teachers, for teachers' to support teaching, learning, school improvement and school management. The TeacherNet UK steering group represents from most major government organisations involved with teachers' professional development. De Montfort University, the Institute of Education, University of London and Ultralab, Anglia Polytechnic University are the main investors of time and resource.

The TeacherNetUK organisation is unique because impetus comes from those who see potential in the Internet for enhancing professional practice in education. The Steering Group are planning to meet the challenge to ensure that change which is pedagogically sound, takes place quickly. For this reason TeacherNet UK has sought an open

partnership with a range of media and computer companies. Companies currently talking to TeacherNetUK include: ICL, Oracle, Cisco, Sun and Xemplar (<http://www.teachernetuk.org.uk>). This open access on line learning and teaching community with established contacts world wide could provide an independent umbrella for all the providers. The National Council for Education Technology could also provide their services within this remit.

Oracle's new interest in education opens the field of technologies available to teaching and learning: delivery methods can range from existing computers and software to touch screen information kiosks, network computers and even play stations and televisions sets. Smart cards allow access in other public places like libraries and community centres. These systems permit cheaper access, but can also be delivered on powerful multimedia hardware and software.

Oracle technology offers new perspectives on learning which could be significant: sophisticated profiling techniques will allow teacher to specify and refine their interests and the languages they wish to receive. Oracle learning architecture may provide a way of delivering learning content which teachers can design and change themselves.

Meanwhile the BBC in cooperation with Oracle are experimenting with box tops and digital television which promise exciting opportunities for multimedia learning on networks. Their prototype site is under wraps until January 14th when it will be launched at BETT at Olympia. However BBC Education is establishing their interest in teacher education by launching 'Computers Don't Bite: Teachers' in May 1998. Working in partnership with key education and commercial providers the BBC is providing a range of ICT training material (print, CD-ROM, Web site) to be used as a teaching and learning resource. The aim is to introduce teachers to ICT by stressing the benefits both on an individual basis and within the curriculum.

A steering group has been set up to advise on the development of the project; members include the DfEE, NCET, NAACE, TTA, The Scottish Office, SCAA, SCET, UK NetYear, Research Machines, ICL, Xemplar, primary and secondary teachers. There is also an active relationship with the Parents Information Network and The National Confederation of Parent Teacher Associations. Advisory Groups - comprising of teachers, Local Education Authorities, Local Authorities and teacher training agencies - are being set up across the country to trial the sample material. Based on this feedback the project will be further developed.

The BBC is also widely trusted in education and could provide the last piece of the jigsaw in terms of acceptable editorial control and quality content. In this country education suppliers are responsible and committed, but impecunious. A big international player taking overall control of Learning Grid content in the future might decide on the cheapest method of delivering a service: a vast inactive repository of materials used to supplement text books. Interactive services need more commitment. Working in partnership with teachers and existing service providers, the BBC could produce a world leader in education services on open platforms. The use of English would make this interactive service highly competitive.

The consultative document has produced a healthy response. Like many professional groups who rose to the challenge, the British Computer Society Schools' Committee

identified issues that need to be addressed in this four year period by teachers and teacher educators.

The Schools' Committee warn against allowing resourcing issues to overwhelm the need to concentrate on using this technology creatively and effectively in teachers' professional work. National targets must be seen as developmental by schools and teachers, as part of a genuine process to develop the profession and measure whether resources are adequate and are being well targeted.

Teachers as the change agents should be resourced, if possible, before their pupils make strong demands on their ICT skills. A key issue for government in raising standards of expertise is the requirement for a range of differentiated, tailored long term programmes of study for teachers over the four years of the project.

The quality of the trainer is paramount. The best training integrates issues of technical skill, good curriculum practice and vision. Universal access to training and heads strong support for teachers' attendance must be achieved. All appropriate types of training will be important including self-study materials, reviewed regularly and easily downloadable: courses with on-line tutors, high level seminars, conferences, and video material. Kitemarking and accreditation at a wider range of centres will be required. Since the response from teachers will depend on the quality of training, investment in trainers and training centres would be well placed. They should be included in offers to schools, particularly to ensure training takes place on similar systems to those used by schools.

Of course, the trainers themselves will need support preferably in such a way as to consolidate good practice across the UK. One approach could be on-line mentoring, conferencing and publishing. The MirandaNet service (www.mirandanet.com) is one example of the use of open and closed debates in learning. Moderation of on-line debate is new skill for teacher educators and advisers which is vital in engaging participation. Action need to be taken to minimise costs to teachers who volunteer to conference from home at their own expense, including tax relief or exemption, special deals for their own purchases and connection subsidies. Open standards are recommended so that the Grid may be accessed by users of all reasonably recent platforms. While a well designed and smart user interface is important, teachers would prefer to receive information quickly rather than use over-clever systems.

Developing the National Learning Grid through public/private partnership and franchised competing services requires good government example. Short-term government funded pilots, while providing information for decisions on early implementation of new technologies, must now stop and be replaced by long-term initiatives which give all teachers the time and stability to develop their curriculum.

There must be some public accountability in the standards of the National Grid for Learning. LEAs with their detailed knowledge of individual schools and teachers should be integrated in the delivery and monitoring of ICT encouraging the best of LEA practice to be shared and allow local interpretation. Preserving the trust of the individual teacher is vital. Schools need to be protected from crude selling - one local authority inspector had eleven calls in one week from competing companies.

Nation-wide franchising models are probably easier to set up, but can be remote from local contexts and unlikely to understand how to motivate, enthuse and gain the trust of teachers and schools. There is a danger that schools could, after a while, be seen as merely a market to be sold to rather than as the generators of the future UK workforce. The partnership between industry and education must be mutually advantageous and profitable.

Good sense from the teacher professionals who are requesting strong government leadership. The politicians and the civil servants will hear this message repeated frequently. The opportunity should not be underestimated. This challenge to create a sustainable National Learning Grid for the next millenium is likely to have more impact on more people long term than the Greenwich Dome.