Pupils' home use of ICT

There's an important and interesting piece of [research by Valentine, Marsh and Pattie over on the DfES](#) site into home use of ICT for educational purposes, that seems relevant to those using Moodle or other VLEs to support home-school links, as well as to the UK learning platform rollout. They studied home use of about 1200 pupils across 12 primary and secondary schools during the summer term 2004, so the sample size isn't vast and things have perhaps moved on a bit since then, but some of their observations are still quite illuminating.

They report that 89% of their sample had access to a home computer – far higher than one might have imagined, and about the same proportion as for games consoles, it's likely to be higher still by now. The computers have often been bought by parents specifically to help their children with school work, and were often better than the machines available in schools. It's interesting that other modes of provision, such as after school computer clubs, library provision and internet cafes, tended to be used as an alternative by those who already had home computers, rather than by those who didn't have any access at home. The authors suggest that these alternative models need to be made more appealing to the minority without home access, but surely a better proposition would be to find some way of providing home computers for those who presently have none. [Abolishing the home computer initiative](#) is unlikely to help here.

Because the level of computer ownership is now so high, they suggest that the digital divide, in hardware terms at least, is now so narrow that schools need to start exploiting the opportunities ICT offers for homework and home-school links. It appears that most of the teachers they talked to avoid requiring homework to be done via computer because of digital divide concerns, and yet there's an implicit assumption that those with computers will use them where possible, and so the digital divide is driven underground.

More significant seems to be a broader cultural capital divide, as well as divides in "pupils' confidence, competence and interest" in ICT resources, which teachers surely have some responsibility to address:

> Children who have more opportunities to access information/educational opportunities outside of school are more likely to be motivated by school work. It thus highlights the importance of parental support and the need for schools to address disparities in parents' levels of motivation and ability to provide for and assist their children.

Educational use at home seems to have been modelled on use in school for the most part, and the report presents some fairly detailed analysis subject by subject.

There was surprisingly little use made of ICT to support home-school links, with only 12% of pupils regularly using school websites/extranets, and over half never visiting them, because pupils were unaware of them, had technical difficulties accessing it, or found the site boring. ICT was mentioned in only 4% of primary school home-school agreements. This is despite previous research that had

> identified home school links as having the potential to radically extend pupils learning opportunities beyond the school and the school day" and case studies suggesting that this sort of ICT use could create a more integrated pattern of learning between home and school.

On the other hand,

> There is also a risk that increased home-school links and therefore parents' awareness of, and involvement in, children's home use of ICT may undermine the qualities of home ICT – freedom to experiment and so on - that children value and which motivates them to use it.

There was little use of the Internet to facilitate communication between teachers and pupils, in part because of child protection worries, but also many teachers seemed concerned about the increased workload that this might involve.

Furthermore, and not perhaps surprisingly,

> There was little evidence of the use of communication software for collaborative homework, although given the high level of interests many children demonstrated in online communication, this is an area which could be utilised when setting tasks.
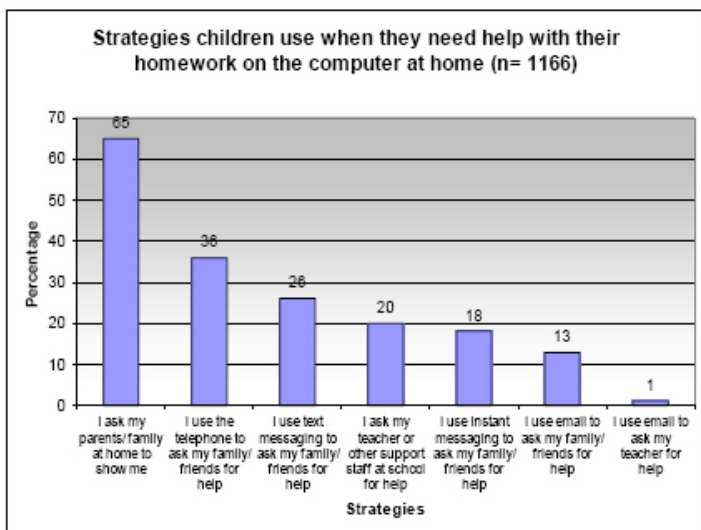
In fact though, many pupils, particularly girls, were using ICT (including telephones and txt) for communication on homework, although this was informally, rather than through any system supported or monitored by the school'

Clearly the social constuctivist approach that Moodle's communication and collaboration tools support is something which many pupils would be familiar with.

(Copied from the report)

There's been quite a heated exchange on both NAACE and MirandaNet lists the last few days about the impact on ICT on attainment, and many would acknowledge that there's more the education than can be measured by pencil and paper tests. That said, the report did look at PIPS and YELLIS test data and use multivariate regression analysis to investigate links with home computer use: for the most part, it's yet another No Significant Difference story, however they did find that there was a

perception amongst pupils, parents and teachers that home computing would help with grades, and some correlation (although relatively small effect size) between home computing and attainment, particularly in mathematics, although this was an area in which relatively little computer based homework was set. More significantly there was a strong *negative* correlation between non-educational use of computers and attainment – the authors see this as a time thing, and thus schools need to develop strategies to re-direct pupils' use of computing out of schools away from fun/games and towards more 'educational' activities.

It seems to me that the use of a VLE like Moodle can make it relatively easy for a school to leverage the power and near ubiquity of home computers to support and extend pupils learning at home, and that the 'digital divide' can no longer be an excuse for not using this technology, although more still needs to be done to ensure that all pupils can access the VLE from home – I really don't think after school provision, libraries etc are good enough as an alternative, although PDAs/$100 laptops may be. The communication and collaboration tools that Moodle provides would be one way of taking some aspects of the leisure use of computing at home and re-purposing it to more educational ends, but I hope that there'd also be some way of supporting informal, independent learning beyond the curriculum – I think Elgg's great for this, and if a school can provide this sort of functionality, then myspace, facebook and bebo perhaps become less appealing. More interesting still is going to be the effect all this has on teaching – the study highlighted a general lack of awareness, and relative resistance to greater use of ICT to support home-school links, and I suspect addressing this issue is going to be harder than the technical side of things.

Reference:
Valentine, G, Marsh, J, Pattie, C & BRMB (2005), Children and young people's home use of ICT for educational purposes: the impact on attainment at Key Stages 1-4, Unviersity of Leeds. Available for download from http://www.dfes.gov.uk/research/data/uploadfile s/RR672.pdf