

Beating the Credit Crunch

Dr John Spencer gives a guide to tackling ICT overspend.

The Credit Crunch is nothing to celebrate, particularly if you are someone who faces unemployment. I want to present aspects of the economic landscape positively without descending into 'a bit of hardship will do us all good' rhetoric.

The area that I think will benefit from a new realistic attitude to consumption is computing, in particular computing in an educational context. The current edu-ICT model is unsustainable. It simply costs too much and wastes too much. BECTA, the Government's educational technology quango has been saying so publicly for years.

In times of plenty no-one noticed the billions of print-outs, the mega-watts of power computers consumed and the enormous sums of money spent on software licences. The really good news is that excellent ICT provision does not depend on huge amounts of money. Below is a simple guide to tackling ICT over-spend.

Step One

Stop paying for expensive proprietary software licences.

You may have noticed that high quality free, open source software, free to download and distribute legally now exists for nearly all the applications commonly used in education. It works on Windows and Mac computers as well as they do on Linux computers.

Here is a list of a few of the best quality products: Linux, Xen, Open Office 3, Firefox, Chrome, Thunderbird, Evolution, Pidgin, Scribus, Inkscape, Gimp 2.6, Moodle, MPlayer. Don't know them all or what they could replace? Then it's time you did. Download and try them. You'll be amazed.

Step Two

You have now downloaded the free stuff mentioned above and more (one gets carried away), evaluated it for yourself, and have just cancelled £10,000 of licence fee renewals. **But what to do with the money?**

Easy, stop wasting electricity; it is very expensive.

The normal PC has a 400 watt PSU and a 50 watt LCD watt monitor. Even on standby it uses 130 (plus) watts. The average server stack (in education) running 24/7 has 5 x 700 watt PSUs + airconditioning (5kw). Today the performance needed to run Office type suites at a crisp pace can be had from desktop computers drawing only 20 watts max. Check out the Dell Hybrid Mini or the Eee Box.

Spend your upfront licence savings on replacing some of your gas-guzzlers with low energy desktops and use free virtualisation software to convert four hardware servers into one.

Sit back and next year, count the money saved on power and replace the rest of your everyday stock with low energy equivalents. How much? Bear in mind that an average 1000 student setting spends between £15,000 and £20,000 per year on ICT related electricity costs and the Eee Box costs £156 ex vat.



Step Three

Ok, you are still not satisfied with the huge savings you have made, but also want to increase your students' classroom use of computers?

Simple, stop owning computers!

Make use of the computers (be they netbooks or laptops) that students own. Educational establishments have invested huge amounts of money in computers, infrastructure and connectivity but it is too much to ask as well that they should provide and support a computer for each and every student especially when many have their own. However, for all sorts of reasons student-owned computers are not suitable for class use.

The answer is to make use of thin-client computing. Free, open source thin-client terminal servers provide licence-free applications to all. What is more, nearly all student owned hardware can PXE-boot via wired outlets or securely over wireless access points into the server.

PXE means that the boot is from the computer's network hardware into a standardised desktop without touching the owner's installed software and operating system, whether the latter is working fully or not! Thin-client systems allow the student's hardware to lead a double life as a personal computer and as a terminal-client accessing the establishment's applications, Intranet (including VLE) and filtered Internet. With a thin client model you only have to provide the server, the infrastructure, the Internet and the Learning Platform. That's enough for anyone!

These three simple steps could slash ICT costs by up to 90%.

If everyone is using a computer to access information on your Internet and VLE then why are you printing 3000 A4 paper sheets per student per year?

Now is the time to take stock and cut costs but at the same time improve resourcing. Impossible? You know it can be done step by step. Good luck and have fun.

Dr John Spencer has 30 years of teaching experience and is a developer for OCR exam board ICT syllabuses. He is Head of Education for Sirius Corporation PLC, the UK's leading Open Source services group, and is totally committed to reducing ICT costs in education.