

ICT in the Classroom

Listening to the Teachers

A report on Focus Group findings

October 2009

The class of 2010 will be the first year to graduate from an education journey that started without much ICT and finished with students carrying more memory on their phones than was used in the Apollo landing.

So what's the state of ICT provision in classrooms today? Understandably, it has grown organically, so solutions may be piecemeal or partial at best. As we turn another decade, we could choose to invest in ICT infrastructure as we are in school building, to ensure we equip the class of 2020 with great foresight, as well as perfect hindsight.

Wyse Technology explored the state of ICT in the classrooms and the vision for the future with two focus groups of teachers and ICT technicians from primary and secondary schools and further education colleges.

There were a number of interesting issues and observations following on from the focus groups, which for ease of reference we have clustered into three sections: teaching and technology, schools and technology, and solutions and technology. We then consider the future, and conclude with a classroom ICT wish-list for the class of 2020.

Teaching and Technology

1. Reliability

Teacher's schedules throughout the school day have become increasingly pressured, and disruption to the planned schedule has a direct impact on learning outcomes. Day-to-day experience of classroom ICT has created very real concerns over whether the technology - designed to enhance the learning process - will work. As a result, there is a real risk that even the thought of using technology becomes stressful. Whatever the cause of the unreliability, blank screens in the classroom will lead to blank faces. Facing rows of unengaged students while frantically hitting 'control-alt-delete', does nothing for the learning process, class control or anyone's faith in technology. So the most important criteria for classroom ICT is that it is absolutely reliable. It needs to work every time, on time, and any trouble-shooting solution must be both swift and simple.

This is particularly important as ICT in the home becomes more prevalent and less expensive. Today's teenagers run their lives through their iPhones, social networking sites and iTunes, so the key challenge is to harness that interest and creativity into the classroom environment. Not that access alone provides engagement and a guaranteed learning outcome. The teachers we spoke to confirmed that classroom ICT can open possibilities for personalised learning and can trigger intellectual curiosity. If classroom computers are unreliable, slow and too old to support interesting applications those learning outcomes will be compromised.

We asked our teachers to rank the assets they would like to see in their classroom ICT – and their top ten was:

1. Always Works
2. Faster Boot up
3. Quick Access
4. Multimedia
5. Access anywhere
6. Longer life span
7. Fewer calls to help desk
8. Personalisation
9. Quiet
10. Small

However it was clear that 'always works' was by far the most important criteria – it was the top priority by a significant margin.

2. Cost

Some teachers expressed concerns over the cost of maintenance for all of the ICT equipment – noting that laptops are most easily broken, and the expensive to replace. Moreover significant additional costs are incurred through license fees for software. Many technicians made the point that the initial outlay to provide the hardware is only the initial spend – the cost of licenses is significant. Head teachers in the focus groups reported being challenged to provide all the schools ICT requirements on the current budgets.

3. Layout

The rush to deploy laptop computers in classrooms was not generally welcomed by the teachers. While their flexibility was appreciated, they were generally thought to be less reliable than desktop PCs especially when charging was done through a laptop trolley. The inability of the teacher to see the laptop screen from the front of the class was a concern as it made it impossible to quickly check who was, or was not, on-task. A preferred layout was for desktop computers around the walls, with a limited number of laptops available for group work in or out of the classroom.

4. Relevance

Some teachers feel a real pressure to integrate ICT into their lessons, only they are not quite sure how or why. This pressure is sometimes driven from external sources such as the personalised learning agenda. For some teachers it is easier to use ICT to dazzle students through flash gimmicks than to fully integrate classroom ICT into the learning experience. So in this scenario ICT equipment is working, but more for class control and box ticking than to enhance the learning experience within the classroom.

There was a consensus in the group that for OFSTED to grade a lesson as 'outstanding' they would be looking for every child to be engaged and have hands on experience of the ICT during the lesson. Many teachers thought that this was the next step for schools, suggesting that they are not quite there yet.

5. Limited use/access

Teachers in the focus groups claimed that the reverse of this is also happening in schools up and down the country where some (perhaps older) teachers are hesitant about using computers in the classroom. So either they don't or they position computers as a treat. In this knowledge economy, society cannot afford for tomorrow's workforce to be anything other than completely comfortable with ICT - so limited ICT or ICT as a treat are both unhelpful options.

Some students experience computers in the classroom once the laptop trolley has been rolled into the room, and each student has taken a laptop, booted it up and waited for the system to kick in. This happens to students more than once a day, according to the focus groups. Estimates vary over how much time is lost in this set up process each time. Whatever it is, over the duration of a school career, it will be a significant amount of time.

Schools and Technology

1. Deciding what to buy – whose responsibility is it anyway?

Deciding what ICT provision to buy and install in schools is, of course, a significant decision. However it seems that the process schools conduct to make these strategically significant choices is ad hoc and opportunistic. One head teacher from Essex suggested that he made his purchase decision through a combination of listening to his staff, and a chat with a friend who runs his own IT business. Fortunately, the friend did know what he was talking about and the advice given was sound. However 'mates rates' and friendly advice is an inappropriate way, as there is potentially no quality control and no holistic view for schools to decide what ICT to buy.

This was echoed by the technicians in the groups who spoke of budgets to spend on whatever ICT equipment they thought necessary, rather than submitting to any process. There was a strong request for much more proactive support from the local authorities on procurement:

One head teacher commented, "Ensuring we bought the best ICT for our children was a key decision for me. I'm not an IT expert, so finding the right people to advise us was a real challenge. It was a significant investment for the school and we got it right by listening to the class teachers and personal contacts. It would be great to have a more structured support system at a local or regional level."

2. Teacher training

One issue that came up repeatedly was about training teachers on new applications and techniques offered by the ICT provision in schools. One teacher commented that the training happens at most once a year – then if the member of staff who was really good at this leaves all that knowledge goes with them. There was a real appetite for more regular training to ensure teachers were comfortable and confident in front of the class. This seemed to indicate a willingness amongst those present to embrace ICT in the classroom, but only if they were fully confident of the technology and the learning outcomes.

3. Embracing everyday technology

When asked what they would like to start doing with ICT in the classroom, all of the teachers were interested in harnessing the technology the students are already using to deliver learning outcomes. Whether this is through the use of mobile phones, cameras or iPods, this is the way many students relate to the world, so using them to teach with will make education more relevant and engaging.

Solutions and Technology

The teachers that attended the focus groups were unaware of alternatives to personal computers that could be more reliable and productive in classroom. Thin computing technology with its reliability benefits and cost savings were unknown to the classroom teachers. Some of the school technicians were aware of thin clients and were actively pursuing these options, but even then their knowledge was not current and they lacked awareness of the current potential of these solutions. Of course if teachers and heads are unaware of the options available to them and are not getting the appropriate advice from local authorities or BECTA it is not surprising that expensive decisions are being made – and the cost is being paid by our children.

Classroom ICT and the future

We asked teachers to consider what the ICT requirements of future classroom would be – although they couldn't agree on a top ten, they could agree on the top 14 considerations:

- Everything networked – touch screens – same screen to all students – tasks are timed
- More controlled system – walled garden – keep students on task
- IT more accessible to students – hands on – access wherever they want to
- Not initiative fatigue – don't need more 'new ideas'
- Virtual Learning Environments
- Ring fencing on funding that schools get for ICT – currently use money that can use for building or IT
- Non agenda-driven advice from councils
- Ongoing regular and meaningful training – share best practice
- Personalised learning – e.g. thinking about using phones in lessons to embrace the technology the children already have
- Simplified access for teachers
- Every child with broadband access at home – not necessarily own laptop
- After school ICT clubs
- Get parents involved
- IT support needs to be more effective and cheaper – especially when outsourcing to a managed service provider - which is increasingly common especially in Building Schools for the Future projects.

Finally given all of this information we asked the teachers to develop their wish-lists. They told us:

Technical Issues

- Reliable and simple ICT systems
- Networked IT
- Every child with broadband access

Individual Learning

- Accessible ICT – for students to access whenever they want
- Personalised learning – home and school working together
- Using mobiles as an education device
- Virtual Learning Environment

Advice

- Independent ICT advisors for school

Funding

- Ring fenced funding for ICT

Training

- Meaningful, regular training

Conclusion

Of course, anything to do with education is likely to be emotive and the combination of education and computers is even more so. Key things we have learnt and that we could fix are as follows:

1. Teachers are not aware of all the ICT options available to them, and are making ill-informed decisions about classroom provision, because they lack the support and advice infrastructure. This could be rectified through local authority support. Linked to this, budgets for ICT should be ring-fenced
2. Secondly teachers need on-going and engaging training to ensure they are using the ICT to support learning outcomes rather than for crowd control
3. Finally and most importantly the future of ICT is dependent on reliability in the classroom. Reliability is king – and providers will either embrace this and flourish or reject it at their expense

About Wyse in Education

Wyse provides educational institutions with advanced technology tools that enable them to create a quality learning environment. Schools with widespread thin-computing implementations have found that students who have access to a digital learning environment are more stimulated, more motivated, and perform better academically. Wyse makes learning and teaching enjoyable and affordable with smart, low-maintenance solutions to get students up to speed on their computer skills, help teachers deliver their curriculums in exciting new ways, and provide staff with easy access to centralised information.

- Networked learning centres, computer labs and libraries can be equipped with more workstations at a lower cost
- Secure, safe, durable, and student-proof because desktop controls and icons can be locked down, no floppy drives, no way to introduce viruses that could compromise a system, and no breakable moving parts
- Quick initial installation and software upgrades
- Lower energy usage than PCs means additional cost savings