



# DISTANCE LEARNING

**SAL MCKEOWN** visits the ATHENA project to see how video conferencing technology is being used to help pupils who are under-performing

“**W**hat do you think is in the parcel? It’s come all the way from Brazil. Shall we open it?”

A group of Year 5 pupils at Paganel Primary School are having a lesson. Jaz Dhillon from the ATHENA project starts by greeting the class teacher and chats with some of the pupils about their school fair. But this is numeracy with a difference: Jaz is not in the classroom. She is a few miles down the road in the ATHENA base at Harborne High School.

ATHENA is an Excellence in Cities initiative, which started in 2001. It brought together five primary schools in Birmingham with Harborne Hill Secondary School. The project had three aims: to collect pupil level data, to raise attainment

by targeting support, and to use ICT to remove barriers to learning.

## Standards

Collecting data may not be the most exciting part of teaching but it has been a central plank in ATHENA’s drive to raise standards. They have used the QCA optional test data to identify pupils underperforming in Years 5, 6 and 7 in specific aspects of literacy and numeracy. “There are 32 areas of mathematical competence and it would be really hard to analyse the marked papers without some form of ICT,” says Geoff Turrell, Director of ATHENA. “Sometimes one particular area is a problem for a class but in that case the teacher often has things in train to deal

with it; at other times, it might just be a couple of children in each class who find an area difficult. For example, in recent tests, 96 per cent of the children were having problems with decimals but only a few children in each school were struggling with negative numbers; so we developed a programme with negative number materials that could be used across all the schools. This left the class teacher free to tackle decimals, which the class as a whole needed.”

These days, schools are in competition with one another to minimise the effects of falling rolls but the ATHENA project has encouraged teachers to collaborate. In Years 5 and 6, teachers plan lessons together and discuss concerns. “Often they are facing the same issues,” says Geoff, “such

## EXTENDING OPPORTUNITIES FOR LEARNING

as how to support kids with special needs, or children who leave or arrive part way through the year.” Because ATHENA is not directly involved with any individual school, they are able to provide a forum for discussion. They can also provide training and technology support. They discovered some classrooms had interactive whiteboards but were just using them as a presentation technology. Another school did not have the boards in their Year 5 classroom so ATHENA provided suitable training and loaned some extra boards. Now teachers are producing good interactive resources that benefit children across all five schools.

Today’s lesson is all about area. The group is settling down to what they believe will just be a routine lesson when Geoff appears over the video link and brings in the parcel. The excitement levels rise. The pupils are delighted when, bit by bit, a big black bird emerges from the brown paper. It is a crow puppet with a note attached. Jaz projects the note onto their interactive whiteboard and the children learn that the crow is close to death after his long journey and they have to find worms to keep him alive. They are told that each square metre of garden has 16 worms so they need to calculate the area of different spaces to establish if they have enough for his daily allowance.

The children in Paganel Primary are all absorbed in saving the crow. The fact the lesson is being delivered over interactive video technology and Jaz and Geoff are not in the same room add another dimension to the way the children behave. Given that all the pupils in this group have been identified as needing extra support with numeracy, and some find it hard to concentrate in lessons, it is fascinating to see how focused they are. The reasons for this, it seems to me, are quite complex. There is good teamwork between the class teacher and Jaz and each brings different skills. Jaz has slick presentation skills and many of the qualities of a good television presenter. The class teacher knows the pupils and picks out children to answer questions.

### Concentration

Jaz keeps the lesson very fast with lots of activities and it strikes me that many of the lessons I see in school have become slower over time. Staff often develop a measured style of teaching which involves presentation, activity and evaluation. In contrast, Jaz pushes things along: “You have 50 seconds to work out the area, starting now.” This is more like *Countdown* than a conventional lesson.

Undoubtedly being taught by a teacher who is not in the room makes a difference. Pupils put up their hands, instead of shouting out but there is more to it than that. Jaz goes into the schools during the week so she is able to gauge the children’s behaviour and reactions when they are in the classroom compared to the virtual classroom where she is speaking to them from Harborne. “There is no doubt about it, the video technology seems to do something to their listening skills; they concentrate much harder and that could be because they can’t keep asking me to repeat instructions. It also is a powerful tool for improving behaviour.”

The children know they have to speak slowly and clearly. They have to explain their working out to Jaz and this encourages them to express themselves with greater clarity. She is an invisible presence in the classroom, rather like Big Brother. Children feel outside their natural comfort zone and have to adapt. Certainly, this style of delivery makes them very focused and quite willing to discuss strategies and processes. You might assume that this is an auditory medium with little to offer the visual learner but there is a document camera so visual materials can be exchanged quickly between Jaz and the classroom over the video link. Pupils can come forward and put their work under the camera viewer to show what they have done.

Jaz goes into the schools once a week to work with pupils but also provides some professional development for staff. “Sometimes teachers can get into a style of teaching that does not work with particular groups, so just by providing a different model things may improve,” she says. “It might be the style of questioning, the type of activity or just having some interactive web activities to work with that can make all the difference. We can find good web resources for them to use. Teachers don’t have time for trawling. Then there is team teaching where we offer mentoring; so for one morning a week we team teach and staff can develop their expertise. Collaboration is the key.”

### Attitudes

Obviously, it took time to convince teachers. “When we started out, there was a lot of resistance as staff felt we were treading on their toes,” says Jaz. “They knew their pupils well and were suspicious of us, but gradually attitudes have changed. They see what we can offer. With our computerised system we can mark and crunch standardised test data quickly and accurately. We

can take papers, and produce up to 12 different reports identifying not only pupils who appear to be underperforming, but also which aspects of literacy or numeracy they find hard. As time has gone on, the ATHENA project has become more embedded so now the Birmingham Grid for Learning looks at the results from ATHENA and then provides materials to target some of the weakest areas.”

Using ICT effectively is the third aim of the ATHENA project. Polycom supplies the Polycom VSX classroom video technology to enable schools to keep in touch with ATHENA and with one another. They are also putting Polycom PVX video communication software on head teachers’ laptops, which lets them collaborate and provide support for one another. There is a danger that pockets of technology and expertise can remain locked into a small group of enthusiasts. ATHENA has been working with the Birmingham Grid for Learning to make sure that this does not happen. There are 76 secondary schools in Birmingham and the BGFL organises a technology fortnight featuring about 30 events. Some events have been enormously successful. *Rock Idol* is a case in point. This involves schools putting forward their budding musicians to perform live via video link to a panel of expert judges. A video conference and Internet audience post comments in an attempt to influence the judges and votes. Last time there were 200,000 votes and the BGFL struggled to cope. However, it proved a good use of technology as the head of music had to find the equipment, get it to work and make sure all the performers were on their mark and ready to go at a moment’s notice. Having achieved that, they are not likely to go back to old ways of teaching.

So, will we see lots of remote video teaching and learning in the future? Quite possibly: if there is an increasing shortage of teachers, it might be that skilled teachers are beamed into classrooms using video conferencing equipment. Before my visit, I worried that the lesson would be cold and remote, more like a lecture. In fact, every child was on task and working at a slightly faster pace than was comfortable so they had to focus all the time instead of back peddling or switching off. If this style of teaching gains currency, we may well see improvements in standards but also, and perhaps more importantly, pupils will have a lot of fun.

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