

Assessment is for Learning
Assessment Project Report for John Logie Baird Primary
Argyll and Bute – February 2007

Project Group:

Primarily the P2 class in John Logie Baird Primary School in Helensburgh carried out this project. Having spanned over 2 academic years from February 2006 to the present date, the class each year has consisted of between 24-26 children of varying ability. However, to see what impact ICT has on the delivery of Assessment is for Learning (AifL) two other teachers and their classes became involved. These teachers have had P4/5 and P5/6 classes with 24 children and 25 children respectively and at present both have P7 classes with 23 children in each, again with varying degrees of ability. As a result of this, the project has been undertaken using a broad age-range and ability-range of children and using teachers with different teaching styles to achieve its aim.

Background:

John Logie Baird as a school is very enthusiastic about developing the use of ICT within the classroom to keep up with advancing technology and powerful educational resources. In the school we have found that the children have been more motivated in their learning when using ICT equipment. The use of word processing programmes such as Clicker, maths and environmental Studies CD-ROMs and the use of the Internet stimulate children to 'want' to learn.

At the start of the project the school was very well equipped with ICT resources, having 51 Dell laptops for children to use and 3 interactive whiteboards (1 Promethean and 2 Smartboards), along with 1 or 2 Apple Mac computers in each class. Since then 3 more Promethean boards have been fitted and we are hoping that in the near future all classes will have an interactive whiteboard so that the use of ICT in AifL will be ongoing as teachers develop even more beneficial ideas to cater for the continuously changing needs of the children.

Aims of the project:

With the introduction of Assessment is for Learning in our school we wanted to see how we could utilise our ICT resources to enhance the delivery of AifL learning and teaching strategies. The teachers involved discussed which areas of AifL we thought could be supported by ICT and came up with the following:

- How easy would it be to display learning intentions and success criteria using ICT?
- Would ICT be useful in assessing for next steps i.e. formative assessment?
- Could we use ICT to teach children how to go about the process of peer and self-assessment?
- How useful would ICT be when children were setting targets and goals for themselves?
- How could we use ICT for summative assessment?
- Would ICT enhance our lessons and would children achieve success in a more enjoyable and straightforward way?
- Can ICT help towards developing a more interactive classroom?

Implementation of the project:

In the P2 class we had a Promethean board and associated Promethean Activoting system as teaching resources and the children had access to 16 Dell laptops and an Apple eMac computer.

How easy would it be to display learning intentions and success criteria using ICT?

- Writing the learning intentions on the board made them very visual and clear. If it wasn't clear to the children what they were learning then the learning intention could easily be edited/modified until it was clear.
- Likewise with the success criteria, once the learning intention was clear to the children then as a class we would discuss how they would know they have achieved this. With infants the success criteria was written by the teacher but with older children they wrote down the process they would go through, giving them ownership and a better understanding of the process.
- At first the whole process took some time but they got better at it as they got used to it. I also found that the success criteria changed during a series of lessons but with using ICT the criteria were modified quickly, or added to during the progression of lessons. This also reminded the children about previous success criteria and in this way the children clearly saw the progression in their learning.
- Visually showing the learning intentions and success criteria in this way allowed me to refer back to them easily during our discussion, at the end or even during a lesson when children needed a bit more clarification. Those achieved were ticked during our plenary for a visual celebration of success.
- All of these things could be done on a chalkboard as well as on a non-interactive whiteboard but one major advantage of using ICT in this way is that it can be saved quickly and recalled later for use in the next lesson of a series. Whereas, with a chalk/whiteboard, space on the board is limited and may require to be used for another lesson so needs to be cleared.
- However, there are times when using the interactive whiteboard is not the best way to display learning intentions and success criteria. During group work where multiple learning intentions were involved in the same lesson it was easier to write these down on laminated, colour-coded sheets that were attached to the wall for the children to refer to, so a combination of both procedures was adopted.

Would ICT be useful in assessing for next steps i.e. formative assessment?

During maths, language, environmental studies and science lessons some aspects of ICT have been routinely used to evaluate the effectiveness of teaching and the learning involved. CD-ROMs, the Internet, interactive worksheets and the Activoting system have all contributed to the identification of next steps.

Resources used have been:

- Flipcharts made using Active Primary 2 software.
- Heinemann maths CD-ROMs
- Oxford Reading Tree CD-ROMs

- Multiple choice assessments for the Activoting system
- Black Cat Literacy programme
- Internet sites including www.educationcity.com and www.bbc.co.uk/schools

All these resources allowed children to reinforce their learning in an enjoyable way. Even though they thought they were playing a game it allowed me to observe the extent of their learning and future needs in an inconspicuous way while working with other children. The children worked at the board in small groups, pairs or individually and the results could easily be saved, stored and looked at in the future.

With the Internet educational game site www.educationcity.com there is a tracking system to monitor progress and success.

The Internet site bbc.co.uk/schools has been used to assess the children's understanding in French and environmental studies. These tended to be used at the end of lesson with the whole class using the interactive whiteboard instead of, or as well as, a discussion plenary. The children tended to enjoy these sessions, as again they were actively learning or reviewing learning but not having to write things down.

These are just a few examples of the programmes or resources used that helped to indicate which steps to take next to facilitate the children's learning.

Could we use ICT to teach children how to go about the process of peer and self-assessment?

Initially the processes and strategies of peer and self-assessment need to be taught and demonstrated to the class, so that children are comfortable and competent about the process before they start doing it themselves. I found that this was achieved effectively using the interactive whiteboard.

- Teaching how to edit pieces of writing against the success criteria was much easier with the board than on paper. Pieces of work were scanned into the computer and edited using the pens.
- This allowed all the children to see clearly and their efforts could be saved and modified as the ability of the children grew.
- Attempts were easily changed with less mess.
- As the children became more confident they became increasingly willing to make changes.

Likewise in maths examples of the types of mistakes that are frequently found in children's work have been used to teach the strategies that are used to self-assess work. The children had more difficulty self-assessing in maths than writing because of the much larger variety of learning intentions and success criteria involved.

How useful would ICT be when children were setting targets and goals for themselves?

The P5/6 class last year piloted the use of the original Picasso Personal Learning Plan (PLP) computer programme. Along side this they also completed a paper version of a target diary. In doing this we were able to evaluate each method for ease of use and fulfilment of objective i.e. the children setting targets and goals for themselves after discussion with the teacher.

The results are as follows:

- In a show of hands, the children in the class overwhelmingly voted for the Picasso format over the use of the target diaries. In particular, they do not like to write personal and academic targets and preferred to use the computer as much as they could (no writing, all they had to do was chose from a drop down menu).
- The target diaries were limited in the areas of the curriculum they covered whereas Picasso covers the whole curriculum but as a class they only set targets for reading, writing, maths, science and ICT until they get more used to the programme and the process of setting targets.
- The class used a number of computers so that the information and targets could be set quickly. However, this meant that the P5/6 teacher had difficulty adding in her comments when the computers were in use. She felt that it would be more productive if the children learned how to use the programme first and the targets set in groups and the children given access to one computer in the class to input their data. If this computer was a laptop then the teacher's comments could be added more flexibly at a time and place of their choosing.
- The first input of data was time consuming but after that modifications and new targets were easier to deal with.
- The P5/6 teacher found those that needed the sound, used by some children to help with their reading, was distracting for the other children and that headphones may be a good investment. However, this facility was valuable as it enabled children with reading difficulties to access the programme without support.
- Children didn't need to worry about writing and spelling.
- However, the teacher felt it was easier to use the target diaries in groups and having access to them whenever they were required was easier.

How could we use ICT for summative assessment?

As a summative assessment following a Mary Queen of Scots project, an interactive worksheet was created by using the Appleworks 6 database programme. The children enjoyed filling in this sheet on the computer and printing out the results. However, they could have been saved in an assessment folder as an alternative to printing a hard copy.

The Activoting system has been used by the P2 class in maths, phonics, as well as in environmental studies mainly at the end of topics. However, the voting system doesn't need to be limited to summative assessment and can be used to monitor children's progress through a topic.

The children particularly enjoyed these sessions. The results are correlated very quickly by the computer and can be displayed in a variety of forms from percentage correct to the individual answer given by each child. Again the results can be saved very quickly and comparisons between attempts made.

Could ICT enhance our lessons and would children achieve success in a more enjoyable and straightforward way?

Even before the start of this project ICT technology was being used to help children enjoy their lessons and gain success.

A few years ago a P6 pupil was given a level E problem-solving sheet on which they had to guess at a solution, check the result and then modify if it wasn't right. This child was a

very able boy who found the modifying of the problem frustrating, as he had to keep rubbing out his attempts, making an awful mess on the paper. He never did achieve a correct solution as he quickly gave up. This worksheet was made interactive on the computer and he tackled it again. He achieved success within about 10 minutes and he could print out the colourful result in seconds. He was much more engaged with the activity and found it more enjoyable.

Dramatisation and the subsequent videoing of part of the life of Mary Queen of Scots made it more interesting and stimulating for the children than a paper exercise. Watching the resulting video enabled the children to assess their contribution and discuss any changes that they wanted to make.

With the introduction of the interactive whiteboards and the Activoting system the opportunities for using ICT to enhance the learning and teaching within the school have been further increased as discussed in this report.

Can ICT help towards developing a more interactive classroom?

From all the examples mentioned in this report, it is clear that ICT goes along way to making the classroom more interactive.

Children learn through discussions and interaction. ICT resources and the time spent using them especially if used collaboratively, develops conversations that can become quite involved learning experiences.

The uses of ICT resources however, are only one way of making the classroom more interactive but they do give a teacher another valuable resource to access.

Impact of the project (impact on pupils / staff / school):

Pupils

- Found lessons clearer
- More discussion was generated than when doing a paper exercise
- More motivating and stimulating
- Instant feedback on how they were doing so children could discuss with teacher the next steps
- They saw the progression in their learning more easily
- Completed task with more success
- Could modify their work more easily after self or peer-assessment

Teachers

- Can easily save WALTs and WILFs for use in the future
- Makes delivery by the teacher clearer
- Assessment information is easily stored on the computer but easily accessible
- A huge bank of high quality resources available including the Internet
- Resources are easily shared between teachers
- Activoting system is an easy way to deliver an assessment and results are correlated by the computer
- Generally make the lessons easier to deliver and the aims easier to achieve

School and Parents

- After coming to a demonstration by the P2 class the PTA could see the potential of the boards and the increased motivation of the children and gave the school money for another Promethean board. They have been actively fund raising for further purchases.
- In the near future we are hoping that all classrooms will be fitted with an interactive whiteboard as the other teachers have witnessed their potential.
- The project has not been implemented for long enough to see an improvement in standards within the school but we know that AifL/ICT will contribute to the quality of learning and teaching within the school.

Quotes from Staff and Case Studies:

Comments and uses of a Smartboard from the P5/6 class were as follows:

Strengths:

- WALTs and WILFs, checks on prior knowledge and the plenary sessions are very easy to do with a whiteboard presentation and are then there to be referred back to throughout the lesson. The children can access the different pages, as they require them, to remind them as necessary. The information can also be used in subsequent lessons as a reminder.
- The children can vote on the most useful page to be displayed.
- The presentation is very interactive and so the children can make their own contributions. This encourages immediate assessment. It also leads into other AifL strategies, such as vote on it, take a question round the class/group, beat the teacher.
- The teacher can record initials beside contributions for assessment purposes.
- The presentation can be saved as evidence, so the children do not have to complete worksheets. The teacher can record information on the saved presentation, which can be referred to in the forward plan.
- Parts of presentations can be printed to form sheets that can be used for assessment purposes.
- The WALTs and WILFs can be used directly as the marking criteria, e.g. printed off to be used when marking a piece of writing. The teacher is then reminded only to concentrate on the success criteria. Common problems noticed in the marking that are not part of the success criteria then form the focus of subsequent lessons.
- Resources and assessment information are easily shared and store but not in a paper format so it doesn't take up a lot of room and can be easily printed off if necessary.

Weakness:

- Only one board, so if all of the WALTs and WILFs are on the computer, if the class is working in groups, only one group at a time can refer to theirs.
- Large boards are better because small ones are difficult to read from the back of the classroom. The size of the board limits the amount of information that can be put onto each page.
- In bright sunlight the presentation is difficult to see.
- Projectors on stands or tables and not ceiling mounted are an accident waiting to happen in the primary classroom.

Using the Smartboard for a Mapping lesson – P4/5.

Learning intention: Children were to learn the location of certain features on a map of the world, including the equator, Tropic of Cancer, Tropic of Capricorn and various countries and continents.

The lesson had previously been done individually using a worksheet and a small map of the world in a textbook. The children found this difficult and the evaluation of the lesson was that it had to be redone but approached in a different way for the following reasons:

- The text was very small on the map.
- As a whole class the children couldn't see very well when the features were demonstrated and pinpointed for them on the globe or the map. It was also difficult to explain small details on the maps.
- It involved a lot of one-to-one instruction and therefore was very time consuming.
- The children's work ended up at different stages of completion as there was a wide range of abilities and levels of understanding.
- The children became de-motivated very quickly.

The same lesson was repeated using the Smartboard.

- The learning intention and success criteria were discussed again.
- Everyone could see and areas could be highlighted for easier identification.
- A range of maps were available, some with less detail therefore children weren't confused by a mass of information and features were clearer to them.
- The lesson became totally interactive with the children drawing the features or writing the names of features where they thought they should go on blank maps and the class voting on it the best guess. The children could then see who was closest by accessing another map available that showed the features in the correct place.
- The children were much more engaged with the lesson and motivated enough that they wanted to take part in the lesson and not sit in the background.
- Differing abilities could keep up and were supported by the whole class.
- The lesson encouraged 'risk-taking'.
- The lesson was far clearer and achieved it's objective in a clearer, more stimulating way for both the children and teacher.

Information from a P2 parent at parent's night

Joshua had been so motivated to do his homework by himself, he had even been telling his twin (who is in P2/3) that to be successful in writing a sentence, you have to remember to make sure you have a capital letter at the beginning, a full stop at the end, finger spaces so the teacher can read it and make sure it makes sense – all the success criteria that were visible on the whiteboard when we were building sentences. The mum also said he told her that he had to learn phonics to help him with his reading and spelling in the future – we had been discussing why we were learning our sounds and subsequently had written these goals on the whiteboard.

Evidence:

- Printouts of attempts at editing pieces of writing.
- Results of formative assessment using flipcharts.
- Tracking progress through Educationcity.com.
- Digital photographs of children using the boards.
- Target setting recorded on Picasso.
- Summative assessment results using Activoting system.
- Video footage of use of Activoting filmed by Ms Elaine Magor.

- Case studies and discussions between teachers involved.
- Indication of next steps after formative assessment in forward plans.
- Observations of children using the board and other ICT equipment.

Conclusions:

The main findings of this project are that:

- Interactive whiteboards make a substantial contribution to the delivery of AifL strategies.
- Storage of data is much more efficient on the computer and can be recalled easily in the future.
- Children can visually see their contribution to thinking about their learning without covering all the wall space.
- Children are more motivated using ICT equipment than pieces of paper.
- The children preferred the ICT version for target setting than the paper version and that once the skills have been taught they are motivated to use it regularly.
- Staff ICT skills need to be developed constantly to cater for new technology.
- Children consider using the computer as 'playing'.
- Videoing is a very good resource for peer and self-assessment.
- The Activoting system is a great resource for formative and summative assessment.
- That making up flipcharts and interactive worksheets can be time consuming until the programmes used are better understood.
- That the staff involved is fully committed to developing the use ICT within the classroom.

Next Steps:

- As we are hopefully having interactive whiteboards fitted in all of the classes we need to make sure that the skills that have been built up within the school are passed on to all the staff so that the technology is used to it's fullest potential.
- We hope to set up a system where good practise and resources can be shared efficiently.
- As other teachers get the same hardware we hope to encourage and develop further ideas on the use of ICT within AifL.
- To further embed the use of Picasso for target setting in all classes within the school.
- To purchase more Activoting systems for use in all classrooms so they become an integral part of learning and teaching.

I would like to extend my thanks to Ms Elaine Magor for providing the funding for this project and also to Mrs Helen McGuire and Mrs Lesley Taylor the other two teachers involved in this project.