

No: P51
Title: Evaluating the effect of ICT on two children with specific learning difficulties
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Aim

To investigate how the introduction of ICT within the nursery setting can help two children with learning difficulties to access the Foundation Stage Curriculum.

Background

I have taught at the school for two and a half years, first in year two and then in the nursery. This research is focusing on one child who has autism and one child who has less severe special needs. The autistic child has no language and finds it very difficult to communicate with children and the staff. The child doesn't access any of the activities within the nursery independently and finds it impossible to join in with our regular rules and routines.

The idea for the research developed as the child responded well to audio and visual aids within the everyday setting often choosing to play on the PC or the interactive whiteboard. I felt that further developing the use of ICT in this child's learning would help him to access the curriculum. The immediate response that comes from the ICT and the stimulation that the child receives would hopefully then encourage the child to join in non-ICT activities.

I have also looked at the use of ICT with a child who has less severe special needs and how it can enhance their learning and whether it actually makes a difference to their learning.

Progress

a) Supporting the child on the autistic spectrum

To start the research we chose to use musical programmes on the interactive whiteboard such as "musical leaps and bounds" as this allowed the child to work within the nursery but gave him the space that he needed to access the activity on his own terms. This worked particularly well and although at first the child just simply watched the other children play, his response was dramatic as he was smiling and dancing to the music. After a few days of simply watching we encouraged the child to join with just one other child to make a song, this worked and was the first time we actually saw this child interacting with another child. The child then quite frequently would play alongside the other children and where at first we would have removed him from this situation we eventually left him to enjoy playing alongside the others.

The next step was to try and engage the child on the PC's. We found that when there was a simple drawing programme on the child would not be engaged, he needed that immediate visual and audio effect. This did alter what was put on the computers every day. I made sure that at least one had a visual 'noisy' programme on it.

b) Supporting the child with communication difficulties

The child who had some special needs but not as severe, and also of a very different nature, was able to access the everyday nursery activities so the ICT to him was simply an extra tool to learning and enhance his skills. It was clear to all staff that this child was benefiting from using the computers as it was helping his speech to develop through his talking to the other children about what he was doing and copying the words he heard on the computer, and also his fine motor skills, by using the mouse. Although this child enjoyed using the ICT it was simply an additional choice to him and something that he enjoyed doing alongside the other nursery activities. We found that this child had real problems accessing our writing area so we used a drawing programme on the whiteboard and encouraged this child to practice making large marks with his fingers to try and develop some pencil control. This idea really took off and this child, as he gained in confidence, started to use a pen to draw and a paintbrush to paint which in the past he wouldn't have done without adult intervention.

The evidence was collected for this research with the use of a simple data collection sheet that allowed the tracking of the children and the times that they accessed the ICT within the nursery. This meant that it was easy to see whether or not the ICT was helping these children, it was also easy to see the children were now enjoying the activities as they were becoming much calmer and started reacting to other children and activities in a more positive manner.

Changes In Practice.

a) The child on the autistic spectrum

As the child with Autism started to respond to the use of the interactive whiteboard and certain computer programmes it did make me alter the way I planned the activities in the nursery and a lot more thought went into how these activities were integrated into the Foundation Stage Curriculum.

When planning the different topics and activities for the week the way in which ICT could be embedded into this became more of a focus as I felt that it was also supporting the other children's learning as well as this one particular child. All of the children benefited as they all enjoyed using the ICT and we found that they were able to access the activities with more enthusiasm and commitment. However much this enhanced the children's learning it is also important to remember that ICT can not be used to replace all activities within the nursery and all children still need a wide variety of experiences. As the use of ICT allowed this one child to access the curriculum where he wouldn't have normally done so it did become pivotal to the running of the nursery for a while but over time we felt that the other children might be missing out on the more hands on activities such as playing in the sand and water and painting so we started to develop separate activities such as finger painting and play dough for this child and let them run alongside the other everyday activities

As this child had severe autism and had no language it was hard to get any definite feedback as to whether the use of ICT was helping him. Although it became obvious over this short period of time that the child did enjoy the activities due to his non verbal communications such as laughing when seeing the interactive whiteboard or jumping up and down when he made something happen on the screen. This child's particular difficulties associated with autism such as communication problems, speech problems and lack of interaction caused him problems in the nursery but also meant that he was very good at using the computer and had the patience and ability to complete the programmes without

much effort; this did make us change some of the programmes he was using and try to challenge what he did.

Colleagues felt that the use of ICT was helping to manage this child in an appropriate manner. The child had additional one to one support during his sessions and the nursery nurse working with him saw a difference when we started to gain this child's interest and develop his ICT skills. The only problem she felt was beginning to happen was the child was spending too much time on the computers and it was becoming increasingly difficult to encourage this child to access other methods of learning. And although the ICT had helped some involvement of the child in routine nursery activities he was still very reluctant to join in with the other children. This child was eventually transferred to a special school that could better address his needs.

b) The child with communication difficulties

In comparison the child with less severe special needs actually became much more confident within the nursery with his extra use of ICT. His fine motor skills improved through using a mouse and his hand eye coordination also slightly improved through the use of various programmes on the interactive whiteboard. The child also became more confident with his peers as he could do something well and enjoyed showing the other children how to use the whiteboard or the digital camera. The response that this child gave to us did make the use of ICT change slightly within the nursery as it was felt if it could make a difference to this one child the other children could also benefit, so where and when we embedded ICT into activities became more important. For example we would use the digital blue camera during circle to record the responses to encourage the child to join in or place a laptop in the role play area so that the children could take part in the activity with ease.

Other staff within the nursery felt that this child had made good progress and that he might not have progressed so well if we had stuck to more traditional methods of learning such as starting with a pen and pencil rather than the interactive whiteboard.

This child also really enjoyed taking our digital camera and teddies home. His enthusiasm when he returned with them and explained to the children what he had done with teddy was fascinating and a child who rarely talked was suddenly confidently communicating aspects of his home life with his peers.

This child in particular had parents who were very eager for him to join in activities as normal within the nursery and they commented about how he would suddenly want to draw at home or try to write his name where previously he wouldn't have.

Conclusions and Recommendations.

I think that the use of ICT could be continued to support the child with communication difficulties and help him become more confident with different activities. It would also be a good idea to try and introduce programmable toys to the child and digital cameras and digital blue cameras.

In the future if a child has problems accessing the Foundation Stage curriculum I would consider using ICT to capture their imagination. The impact of a simple picture on the interactive whiteboard is often enough to entice children to take part in an activity. As ICT Test Bed progresses and we get more confident in

using equipment it will become more embedded into our everyday nursery practice so all children will continue to benefit from it.

With a child with less severe special needs it is much easier to use ICT as a learning tool rather than a control method and as a teacher it is fairly easy to embed ICT into the everyday Foundation Stage activities without having to do a lot more planning. Sometimes ICT simply runs along side the other activities and the children simply choose when they want to use it and what they use it for e.g. the digital camera or the bee-bot (a programmable floor toy).

In our ICT Test Bed experience, most children with SEN will benefit from using ICT such as the digital camera, video and Interactive whiteboard as it is often something that they can succeed with where they would ordinarily fail. I think that although ICT will never replace traditional models of learning it is vital that it runs within the curriculum as some children find it the best way to access a learning culture, and as practitioners we should be aware of how children learn and what works for individuals.