

Whiteboard Research

Aim

The aim of the whiteboard research was to raise standards in physical education through the use of ICT by promoting the development of a more reflective and independent approach to learning. This was to be done through the recoding of a series of games lessons, played back through the whiteboard, providing opportunities for pupils to evaluate and improve their own performance.

Research question?

"Was using ICT (video and the interactive white board) an important factor in raising standards and independent learning in a year 3 physical education class."

It was expected that pupils would begin to identify good performance and areas for development in their own work and in the work of others and use their increasing knowledge and understanding constructively to develop their own skills. It was expected also that pupils would begin to apply their skills in small team games, more consistently, with increasing control and accuracy.

Context

Embleton Primary School is situated in the Southmead area of Bristol, an area of significant social disadvantage. There are 236 pupils on roll of which over 50% are on the special needs register.

The current PE co-ordinator joined the school in September 01, in her second year of teaching. The co-ordinator carrying out the whiteboard research chose to use it in her subject leadership area that of physical education in an attempt to raise standards.

Baseline

The data used came from 4 sources:

- ⌘ HMI report (01)
- ⌘ Staff audit (questionnaire)
- ⌘ Pupil questionnaire
- ⌘ Co-ordinators observations

Areas for development following OFSTED and possible interventions

Having been observed the conclusions:

- ⌘ Planning was too brief and objectives unclear - Adopt the QCA SoW and clarify objectives
- ⌘ Most pupils made little progress in the lesson because the teacher failed to involve or improve their individual skills - Have clear paths of progression for skill development and increase independent learning
- ⌘ An unsatisfactory draft policy - Include the use of ICT and curriculum links with other areas. This is where the interactive white board can play an important part.

What did the staff say?

A staff PE audit carried out by the co-ordinator produced evidence that:

- ⌘ Most staff lack confidence in teaching PE
- ⌘ All staff lack confidence in teaching gymnastics and would like training
- ⌘ Few staff have had any training in the past 5 years

Some of the above is compounded by the high turnover of staff at all levels and other areas of the curriculum have had priority.

What did the pupils say?

A pupil questionnaire targeted at the co-ordinators year 3 class produced evidence that:

- ⌘ 50% of class favour PE more than any other subject
- ⌘ 25% of class don't mind PE (not their favourite subject but not their worst)
- ⌘ 25% of class don't like PE
- ⌘ Few children attend sports clubs outside of school
- ⌘ 50% of class would like the opportunity to attend after school/lunchtime sports clubs
- ⌘ 50% pupils didn't know/were not sure if they had to think during PE

What did the co-ordinator say?

Ongoing observations made by the co-ordinator have produced evidence that:

- ⌘ Swimming is by far the most popular activity
- ⌘ Many pupils fail to bring all/part of their kit for physical activities with the exception of swimming

- ⚡ Staffs are concerned about the safety of pupils when using large equipment and would like training, especially gymnastics.
- ⚡ Difficulty in monitoring the balance of PE activities and progression across the key stages due to high staff turnover, absence of plans and lack of clarity for the monitoring.

The Process

The PE co-ordinator from Embleton linked up with Caroline, the assistant project director from Opportunity Network. Caroline before working for Opportunity Network supported physical education for primary and secondary teachers in Bristol. Over a six-week period she worked with the co-ordinator for one PE session per week at Embleton. During this time Caroline modelled the teaching of some lessons and team taught, using the coaching method with the co-ordinator. The lessons were recorded. The interactive whiteboard was used to play back the lessons and discuss the pupil's work with them encouraging them to reflect upon their performance. This also helped clarify the beginning of what independent learning looked like, as the pupil's perception was very limited.

In the past PE lessons had been very structured and didactic in the process. The pupils had been given little opportunity to take responsibility for their own learning. This may have been the case as the class is particularly challenging and there are a number of pupils with behaviour difficulties. (The fear of letting go and losing control).

The class teacher (PE co-ordinator) had witnessed a significant improvement in behaviour throughout the year. With more confidence, in a supportive environment, was now prepared to take a risk and change her style of teaching in order to allow pupils to take more responsibility for their own learning.

Other significant changes included an additional teacher working with the children and the opportunity for pupils to watch their recorded lessons and discuss their work, something they had never had the chance to experience before.

Whilst carrying out the research the co-ordinators raised and encountered a number of issues:

- ⚡ She lacked confidence in using QCA documents and the core tasks
- ⚡ Had limited teaching ideas for taking the children forward in their learning - due to lack of teaching experience

- ⚡ Large class (39) - difficult to ensure maximum participation, especially when wet and in the hall
- ⚡ Resources - school does not have video camera - had to borrow one from another school
- ⚡ Technology - needed support in operating video camera and playing lessons back through the whiteboard
- ⚡ Access to whiteboard - located in ICT suite
- ⚡ Additional time needed outside of 'allocated PE time' for pupils to discuss, reflect, evaluate and plan how to improve performance

Findings

When the children first saw the interactive whiteboard they made comments such as:

'Wow!'

'Exciting!'

'Very cool!' They loved it.

When they were first videoed some of the children played up to the camera and demonstrated negative behaviour, however, when the video was played back through the whiteboard in most cases it had the opposite effect. This was particularly true of a statemented child who became very embarrassed after seeing herself on video having been given clear instructions three times. As a result her behaviour improved significantly. Her comment "I didn't realise I looked silly."

Most pupils regardless of their behaviour were quite embarrassed to see themselves on screen and to begin with were very self-conscious and began to focus more on the development of their P.E. skills.

It became evident through discussion with the children that they were not always aware of what they were doing during lessons and the video helped them to reflect upon their performance. One child commented, 'I think the whiteboard has helped me to learn because you don't know what you are doing in the lesson and you don't realise it's wrong, but when you watch the video on the interactive whiteboard you know what you are doing wrong'.

The children found it quite easy to identify areas for development and were very aware of the things that they themselves and their peers were doing not so well. They found it more difficult to identify good performance but got better at doing this. The children also made themselves target cards and referred to these before each lesson.

The visual dimension had a major impact on all pupils particularly those with learning difficulties. The whiteboard captured their attention and kept them focussed. It enabled all pupils to evaluate their own performance, something that many of them would not have been able to do without visual prompt. The following pupil comment highlights the value of the whiteboard as a visual resource for teaching and learning: 'The whiteboard helps me to learn because it helps me to remember the skills that I have to improve'.

The Impact

Pupil Learning

Pupils at the end of the six-week period were growing as reflective and independent learners and were developing good evaluative skills. They began to compare their own performance with that of their peers, identifying good work and areas for development. They began to think more deeply about what made a performance good and started to use their knowledge and understanding to set their own targets, in order to improve performance. They began to recognise their own success and in turn this boosted their confidence.

Pupils benefited from opportunities to develop their speaking and listening skills through discussion work. Discussions stimulated the use of subject specific language and the children began to use this to good effect with increasing confidence and understanding.

The promotion of independent learning enabled pupils to develop socially. Some children worked co-operatively with all of their teammates whilst others found this difficult. Some children took on leadership roles whilst others were happy to be led. Some pupils tried to solve problems within their own little groups whilst others needed a teacher to intervene.

Although some children found it difficult to work as part of a team most of them realised the importance and understood that it was necessary in order for the team to perform well. This was a valuable learning experience for them and in fact one child with poor social skills wrote down as one of his targets, 'I need to work as a team'. Although this child did not fully meet the target that he had set himself he was aware that this was an area in which he needed to develop and was therefore beginning to take responsibility for his own learning.

Teacher Learning

In terms of 'teacher learning' the research prompted the co-ordinator to further develop her own ICT skills. Because of the relationship that had been formed with other leading links she felt comfortable asking for help when technical problems arose (networking).

One thing that the whiteboard brought to the attention of the co-ordinator was the fact that when pupils and indeed adults are provided with opportunities to learn independently in a non-threatening way and are given a marked degree of autonomy and control over the organisation, conduct and direction of learning, their achievements can have such a huge impact on their levels of confidence. This became evident when the PE co-ordinator suggested to one of her LSA's who lacked confidence in using ICT, that she took a group of under achieving children to do some maths work using the interactive whiteboard. Afterwards the LSA thanked the teacher because she felt good about her achievements. This has made the PE co-ordinator think more carefully about the way she manages her LSA's and also about the situations in which children seem to learn best.

Overall the most valuable learning that took place in the opinion of the co-ordinator in terms of her own professional development, happened as a result of working alongside a more experienced professional. This was by far of more benefit than any training course she had been on as the situation was 'real' and Caroline had much to offer in terms of ideas, knowledge and understanding in the field of PE. The interactive whiteboard has been and will continue to be an excellent tool to aid the learning, and help raise achievement.

Implications

Classroom

As a result of the research carried out, pupils are beginning to take more responsibility for their own learning in physical education and in effect are 'learning to learn'. In addition to the physical skills that pupils have acquired, have begun to develop transferable life long learning skills that will enable them to take greater responsibility for their own learning in other curriculum areas. It is a belief of the Opportunity Network that longer term these skills will 'enable them to be informed citizens leading personally satisfying and socially productive lives'.

School

Embleton is a priority one school within the zone, which means that its initial aim is to

raise standards and achieve value added levels of attainment. Pupils have reached the expected levels and beyond in the area of hockey that has been the focus for the whiteboard research. If such improvements can be made in one small area of the curriculum in such a short space of time, with a little support and direction from a more experienced professional then it is possible to raise standards in all other areas.

It is important that staff continue to develop professionally, identify areas of weakness and have the confidence to ask for the help and support they need. It is equally important however that those supporting do so in a supportive and constructive way.

Zone

Pupils at Embleton have achieved in physical education as a result of networking and collaboration between schools within the zone sharing effective practice. The aims and values of the zone (network) have been promoted through the whiteboard research and there has been a cultural shift in the way pupils learn in physical education. This change has been for the better and in terms of some of the zone standards are beginning to be hit. The improvement in individual teacher performance as a result of the support given through the zone has in fact made a small but significant impact upon school and zone performance. This will now hopefully spread across the whole school. It is evident that networking and sharing good practice works and it seems that in terms of raising standards in all areas of the school curriculum this is the way forward.

Moving Forward

The next stage for the pupils will be to transfer the physical education and life skills that they have learnt through hockey to other areas of sport.

They will continue to develop their evaluative skills and eventually should be able to teach each other in a supportive way. Although the children are able to identify strengths and weaknesses in their own work and in the work of others and are beginning to set their own targets in order to improve their skills, they need to understand how to move themselves and others forward in their learning. In order to do this, pupils will be introduced to the core tasks in the QCA National Curriculum. Using the interactive whiteboard they will study their first recorded gymnastics lesson, one of the lessons in the middle of the six/seven week block and the last lesson and try to level their work in relation to the core task at each stage, informing their targets.

During the period of the whiteboard research the main body of the lesson has been the focus. In addition to the above pupils will be working to improve their warm up sessions.

It is apparent that staff lack confidence in teaching PE and the co-ordinator will be working with staff throughout the next school year to build their confidence and raise standards in PE across the school. As a result of the huge impact the whiteboard has had on pupils learning the co-ordinator will continue to use the whiteboard with other teaches, however she will need to consider how best to use it with different year groups to have the most benefit.