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PROMETHEAN 

Interactive Whiteboards: new tools, new pedagogies, new learning?

Transforming lesson activities: Music for all

Students used interactive whiteboards to learn the processes involved in using the composition programmes, to work through their project, and to present it to their peers. The whiteboards were central to the whole process. Examples are at: www.leedslearning.net/eic Individual and whole class performances can be recorded and displayed as a graphic score: whole class compositions can be created with the ACTive slate and pen.

"As most of our teaching and learning materials are produced and published in-house, I can easily access activities that are in pupil booklets and directly display them for explanation and demonstration purposes. This has had a huge impact on the lessons. The bottom line is that the pupils enjoy using the ACTIVBoard every bit as much as I do!"

Increased student interaction.

When interactive whiteboards are an integral part of Key Stage 3 strategy teaching aids, with student whiteboards and oral and mental starters, student enthusiasm has increased. In some Year 7 lessons their eagerness to interact with the board has been quite overwhelming!

Conventional teaching

Interactive whiteboards have transformed the delivery of the curriculum in conventional whole-class settings. The use of mathematics programmes has improved the ability of many students to conceptualise mathematical processes and modelling.

The use of interactive whiteboards in groups learning animation has meant that students can not only visualise the process of animation, but identify where errors may have occurred. This can then be shared by the whole group, reinforcing communally constructed learning.

Transforming lesson activities

Year 11 students with low mathematical achievement had been 'doing Pythagoras to death' and still struggling with the concepts. Using www.mathslessons.co.uk and 'Who wants to be a millionaire - Pythagoras edition', the students' understanding was tested in a fun and interesting way which clearly ironed out a number of false concepts. The students were wanting to know **how** to work out the answer, rather than **what** the answer was.

Reinforcing Basic Skills

The versatility of the ACTIVBoard means that, apart from it being used to show photographs, maps, highlighted text, graphs, instructions for activities and the learning objectives for the students, students also use the ACTivity curriculum software in a number of subjects. In Geography, for instance, students have designed and presented a weather forecast using a map and symbols from ACTive studio. It's easy for pupils to be involved in the delivery of the lesson.

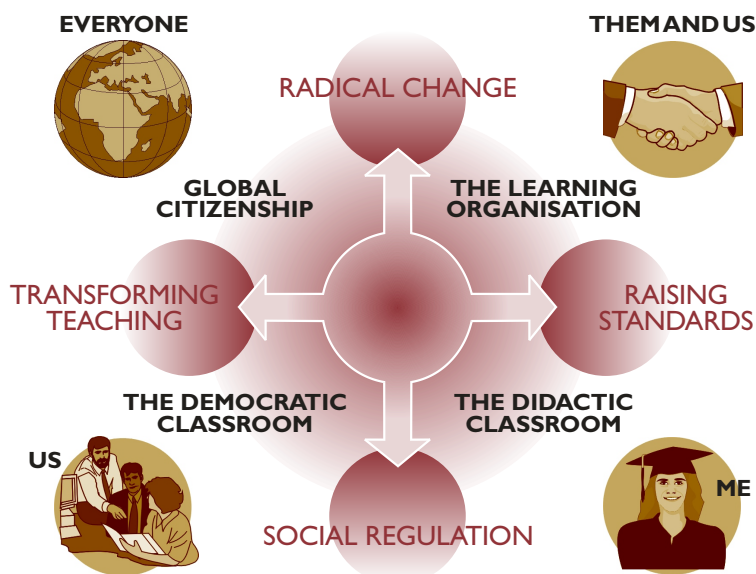
Smoother lesson transition

The use of interactive whiteboard software for lesson preparation has enabled a smooth transition between activities. When videos are embedded within the materials the transition between computer- and video-based materials is seamless.

As more schools are fitted with interactive whiteboards there is a real need for teachers to play an active role in specifying the ways in which this extremely powerful tool is installed and used. The technology can effect a profound change in the ways in which our students learn, the ways in which we teach and, more fundamentally, the ways in which we organise the curriculum and our schools.

These cameos are drawn from more detailed case studies (www.mirandanet.ac.uk/current_projects.htm) and form the beginning of a resource to explore the ways in which interactive whiteboards are used, and the ways in which they contribute to student learning and teacher pedagogies.

They're in no way definitive: what they offer is shared experience, and the beginning of a Community of Practice. When teachers are expected to respond to so many conflicting demands – social regulation vs. radical change; transforming teaching vs. raising standards; and when the audience for learning has expanded beyond the teacher – student relationship, these case studies may provide some ideas for hard-pressed colleagues. Colleagues may wish to explore the MirandaNet site for other case studies.



Transforming the learning environment in History

The Promethean whiteboard has transformed the learning environment by providing opportunities to develop pupil learning and performance. Not only do the activities heighten pupil interest, work can be clearly structured, sequenced and differentiated easily. Historical source images and information can be dynamically generated on a screen, giving a high level of interaction from the pupils in interpreting sources and providing a catalyst for discussion. It has been particularly useful when modelling activities, enabling pupils to compare knowledge with others and identifying the relevance and importance of particular aspects of the information. In displaying text and sources key points can be highlighted,

Internet research days

Students use TextEase as an interface to access web links pages, and to search, select and use data for projects. The interactive whiteboard is the medium through which the groups work.

Citizenship

For a unit of work on Citizenship and Cultural Diversity all Year 8 pupils were taken to Sunderland City Learning Centre for one day's work on the unit. They had access to Activote and Kar2ouche software as part of the ACTIVBoard package. It was interesting to note that all pupils (both boys and girls and all ability ranges) were completely engaged with the activity. Its fun and interactive nature encouraged pupils to produce a high standard of work; watching their final product on the board gave them a real sense of achievement.

Six-weekly evening sessions in a project called Quality Protect, involving young people in care aged 8 – 15. The students worked with a team of adults on a range of activities on ICT projects: Kar2ouche, Band-in-a-Box (Qbase) and Complete Animator. The students, working in vertically-grouped teams, took part in a carousel of activities on a cluster of machines. Interactive whiteboards were used by staff to demonstrate processes and by students, both to work through the processes and to explain and present their work to other groups.

Dynamic language activities

A range of different activities utilise the interactive whiteboard in conjunction with loudspeakers. These include text recognition in different languages, supported by audio files, text manipulation to reorganise sentences or paragraphs and matching exercises with images and text. The interactive whiteboard also acts as a workspace for compiling feedback with input from the teacher and the students in classroom activities, as a visual forum in which students can compile their ideas about a topic, and to present and alter content suggested by the teacher or the students.

Improved lesson quality

"Using presentation software to structure the lesson has made me think even more carefully about how key facts are explained, and to find the best way to sequence my teaching."

Visualisation

The use of graph plotting software on the interactive whiteboard enables far faster understanding of the concepts: students have a clear visual understanding of the topic, and are able to transfer this understanding to other topics.

With an ACTIVBoard installed in the Graphics room all students in the class can see the screen. The board provides immediate information, visibility in all parts of the room, the opportunity for step-by-step methods when working on complex drawing tasks and the opportunity to display comparative designs.

It is used with all year groups and has made the delivery of the curriculum efficient, interesting and enjoyable for both students and teacher. A less obvious advantage of the board is the way in which it reduces the need for so many pieces of paper material: this results in significant savings on reprographic costs.

The impact on teaching and learning has been positive: pupils can be seen to be responding immediately. Formative assessments show faster knowledge retention.

Interactive adventure games

The use of interactive adventure games (such as Civilizations) on an interactive whiteboard means that students can work as a team. Not only do these group activities reinforce Literacy skills, but they also develop the wider Key Skills of Problem Solving, Working with Others and Improving Own Learning and Performance. When students work through the scenarios they are engaged in modelling; the outcomes form a focus for discussion on Citizenship. If the activities are combined with a journal the students have a very powerful piece of evidence to support these cross-curricular themes.

A sense of place: local history and Citizenship

Students used digital images of Leeds as primary sources of information for local history projects. The interactive whiteboard enabled all students to view the images, then select, drag and drop them into a piece of work for editing. Students developed an awareness of local history, and their sense of place was enhanced: both factors which could inhibit acts of vandalism.

You will find more details
about these case studies on
www.mirandanet.ac.uk/current_projects.htm



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Detailed case studies can be found at www.virtuallearning.org.uk

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