

How do interactive whiteboards enhance learning?

New Learning, e-learning

Here are some reasons why students and teachers find that learning is improved using interactive whiteboards. The more that this tool is used the more reasons we'll find.

Ostensiveness

The term 'ostensiveness' relates to the way in which young children learn through pointing at people and objects to reinforce questions or statements. Learning is reinforced through representation by imagery and perceptual organisation, so the use of the mouse and the active interface; the hand; the active desktop and web functionality within programmes are all examples of the ways in which the interactive whiteboard integrates these. The physical act of pointing and activating the screen, whether with a finger, a stylus, pen or the mouse consolidates the topic being learned. The ability to move backwards and forwards in a sequence, or laterally to another topic, provides further learner support.

Ludic elements

The element of play is an important component of learning, and the learning objects that build into the interactive whiteboard presentation combine serious intentions with fun. The ability to integrate animation, sound, video and text provides support for a range of learning styles.

Visualization

The ability for learners to visualize a process through the sequence presented on an interactive whiteboard is an extremely powerful reason for using IWBs. The use of colours, movement, the ability to move backwards and forwards between stages of a process all provide learning reinforcement for students.

Bricolage

Bricolage means 'Do it Yourself' – and a bricoleur is a DIY person. Levi Strauss used the term to describe the ways in which pre-scientific thinking devised a system of meaning from the materials and ideas that were found – to hand – lying around. What IWBs offer is the ability to combine a number of what would otherwise be disparate elements – video, flash animations, text, audio files, web materials and conventional curriculum materials – to construct meaning and understanding for the learners. And the learners, too, can construct meaning for themselves and one another.

Pedagogical Architecture

Granularization of content

Is a phrase one often hears in relation to e-learning materials. In simple terms it means that a topic is broken down into the smallest possible segments, each of which can be dealt with separately. These granules can then be assembled to produce a custom-made course for individuals or groups. What this means for interactive whiteboard users is that material can be collated in terms of levels of generality, with the detail being revealed as the learners find it necessary. Revision materials can be re-packaged from these granules to suit specific student needs.

What learning objects are needed in order that a student can understand a topic? What learning objects are necessary for the student to be able to transfer and apply that knowledge to another domain?

In very simple terms it means that you can organise each learning object into an appropriate folder, then combine them for whatever topic you are delivering – or whatever your students need for learning.

Modules

Modules can be created quickly and easily once banks of learning objects have been collected together. When colleagues collate their materials and distribute them through school networks and across the Internet Just In Time teaching and learning becomes possible.

Mosaics

We often think of the learning process as a mosaic: lots of tiny pieces finally come together to form a picture. Learners are often scrabbling around, with their noses so close to the grindstone, trying to shape the fragments they have so that can fit together – somewhere – that they take a long time before the picture falls into place. If it does. An IWB enables the teacher and learners to locate each fragment – the learning object – and show how it fits in the big picture.

Creating interactive materials

Chris Warren of Actis Ltd has outlined some design principles in:

[*Interactive Whiteboards: an approach to an effective methodology.*](#)

Learning theories

These links provide extremely useful short introductions to learning theories. As you browse them you'll recognise the ways in which your use of an interactive whiteboard can transform the learning of so many of your students.

- [Constructivism](#)
- [Behaviorism](#)
- [Piaget's Developmental Theory](#)
- [Neuroscience](#)
- [Brain-Based Learning](#)
- [Learning Styles](#)
- [Multiple Intelligences](#)
- [Right Brain/Left Brain Thinking](#)
- [Communities of Practice](#)
- [Control Theory](#)
- [Observational Learning](#)
- [Vygotsky and Social Cognition](#)

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