10 IWB Features Every Teacher Should Know About

By Chris Betcher

Teachers starting out on the IWB journey are often dazzled by the obvious features. But once you've been using them for a while, how do you extend your IWB use to make them even more interactive, engaging and productive?

Interactive whiteboard technology has gained enormous momentum in the last year or so, with more and more schools eager to embrace the potential they offer. Certainly in the hands of a skilled teacher they can be a powerful addition to any classroom, bringing more depth to the learning process while engaging student interest.

But do you use them well? Despite the fact that there has been a great deal of research surrounding IWB technology, the results are still rather mixed. Some say they make an enormous difference, some say they make no difference at all, while some research claims that they can actually make things worse. The truth seems to be that IWBs act as an amplifier to existing teaching practice; if the teacher has a sound understanding of pedagogy, works with students using a quality teaching framework and is not afraid to share the classroom dynamic with the students, then IWBs are likely to enhance and support the good teaching already taking place within that classroom.

When a teacher is tapped into the potential that digital resources can bring to the classroom, then IWBs become an amazingly powerful way to supercharge the good teaching practice that is already taking place in that classroom. IWBs enable genuine engagement with ideas by allowing students to manipulate abstract concepts, follow pathways of curiosity and engage with ambiguous content that stimulates deep discussion.

However, to get real value out of interactive technology it's worth thinking about a few simple concepts that form a foundation for good IWB use. Here are 10

important IWB features that every teacher should know about as they prepare to develop those engaging, interactive lessons.

1. Make the most of Dragability

If there is one feature that really sets IWBs apart from any other instructional technology, it is the ability to move objects around the screen by dragging them with a finger or a stylus. The ability of a user, be it teacher or student, to come to the board and physically drag an object from one place to another is one of the defining features of interactive technology.

It sounds almost too simple. Why would something as simple as dragability be such a fundamental aspect of IWB usage? Probably because the ability to physically move an object around a screen by touching it and dragging it forms the basis of interactivity. Dragging requires you to interact with the surface of the board in a very tactile way. Combining human touch with the almost magical ability of a computer to handle multiple media types creates a powerful combination. It brings together all the amazing possibilities of digital media with all the human qualities of good teaching.

Like so much about teaching with an IWB, none of this should come as a surprise. Good teachers have long used things like puzzles, jigsaws, words written on pieces of cardboard, and so on, to help make concepts easier to understand for their students. The basic idea behind dragging an object around on an IWB is conceptually no different to the way a teacher might present her students with a set of cards with words written on them and then asks the students to move them around on a desk to form sentences. These simple "drag and match" exercises are techniques that most teachers use regularly and effectively.

This notion of dragability is key to IWB use. The concept of being able to drag objects around the screen is so fundamental to good IWB use that it could probably be seen as one of the indicators of effective IWB use. Without dragability, an IWB is just a very expensive conventional teaching board. If you do nothing else, learn to design lessons that take advantage of dragability!

Look at what you do right now in your conventional classroom that involves students moving, sorting, classifying, or matching things. Whether it is labeling the bones in a human skeleton, adding musical notes to a staff, sorting a collection of words into nouns and verbs, classifying artwork into different categories, assembling a parts of an image to make a complete picture, matching a word with its definition or any of the many tasks like this that we ask our students to do on a regular basis, think about how many of these tasks are fundamentally about connecting ideas and moving objects from where they are to where they need to be.

2. Layering

Layering refers to the way objects created on the board can be stacked in a particular order so that one object is able to obscure the object below it. So, as a simple example, a picture of a cow could be used to cover the word "cow" and a student or teacher could drag the picture away to reveal the text below. This simple principle of hiding and revealing information with the layer above is a common and extremely useful way to use the IWB interactively.

The number of ways you can use this simple idea of hide-and-reveal are almost limitless. Good teaching is often about telling a story, unfolding complexity with your students in order to make difficult ideas easy to understand. To do this you sometimes need to reveal an idea a little at a time, perhaps covering the key words or images and revealing them in some sort of logical order.

3. An unlimited number of savable screens

Conventional teaching boards suffer from a number of major limitations, but one of the most obvious ones is the amount of stuff you can put on them. After you scribble your notes and diagrams all over them you have to basically clear the board in order to continue, and everything you just scribbled is lost forever. Every teacher has written or drawn a bunch of things on a conventional board, paused for the class to take them in and then attempted to erase them in order to carry on… only to be met with the usual barrage of "Miss! Don't rub it off yet, I haven't finished!"   It makes it hard to keep the lesson flowing along. Once erased, it's

impossible to go back and review something that is no longer there, although many times it would be very handy.

Dedicated IWB software is generally based on a series of screens that can be flipped through like a notebook. This simple idea that your teaching board has unlimited space is a powerful one. It encourages you to rethink the way you pace the delivery of content. It invites you to chunk content into much smaller bites and then simply flip to the next page, rather than trying to cram it all onto one screen. It also provides a less linear pathway through that information because the previous screens don't disappear and can be revisited at any point in a lesson.

4. A huge range of pen and highlighter tools

There has always been enormous power in being able to present ideas to a group in the form of words and pictures. The sheer simplicity of being able to do this is probably what has made the faithful chalkboard such a cornerstone of classrooms all over the world for so many years. While IWBs can do some pretty impressive things, don't lose sight of the fact that you can still use your IWB for something as mundane as "just writing". Some may point out that an old fashioned chalkboard is quicker and simpler to write on in an ad hoc way, but when you take into account the advantages of virtual pens with their variety of colours, pen thicknesses and transparency levels, there is so much more they enable you to do.

IWB pens can be used to write over other sources, annotating images and maps, highlighting text on webpages, calling out important sentences or using arrows to explain the flow of an idea. They can be used to underline the verbs in a sentence, circle the important numbers in a table of data, or draw an army's invasion route on a map.

5. Instant screen captures with the camera tool

Nearly all IWB software has the ability to take a snapshot of whatever is on the screen and then immediately dump it into a flipbook, ready to be shown, annotated, arranged and interacted with. This is typically quick and simple, so that grabbing an image, a piece of text, a table of data, etc, can be done on the fly and instantly dropped into a lesson. While the camera snapshot tool is handy

for preparing lessons, its real power lies in the ability to grab text and images on the fly. If you can see it on your screen, the camera tool can grab it and bring it into your lesson immediately, ready to show, share and discuss.

See an image on the Internet that illustrates a point well? Use the camera tool to grab it and import it to your lesson. Photographs, diagrams, artwork, maps and charts can all be brought into your lesson and shown, annotated, and marked up. Using the pen and highlighter tools, you and your students can interact with images, circling key features, tracing over important sections and helping deepen their understanding of key visual ideas.

The camera tool also offers a great way to easily take text from other sources, snapshot it and drop it into a flipbook ready to annotate. Poetry, prose, news articles, music scores, webpages, quotes… just find it, snapshot it and use it.

Of course, none of this is revolutionary. For years teachers have shown resources to students using technologies like wall posters or overhead projectors. Using an overhead projector for example, teachers were able to show information to students on a big screen and even use OHP pens to annotate and write over that information. This is not a new idea, and the ability to interact with an article or image by writing over it has always been an extremely useful teaching technique. The downside of OHP transparencies is that they can be time consuming to prepare, must usually be done in advance of the lesson, are typically limited to black and white, require significant effort to erase and reuse, and require physical duplication to share with multiple teachers. What the IWB can do is to provide the same sort of functionality with the added benefits of full colour imagery, non-destructive saving, simple sharing and storage, ease of reuse, and perhaps most significant of all, to allow these snapshots to be created on the fly if needed.

This comes back to one of our key ideas. Used well, IWBs provide all the advantages that traditional teaching tools have always offered but with layers of additional functionality that can open entirely new opportunities for learning in new ways.

6. Adding media to the mix

One of the biggest differentiators between interactive board technology and anything that existed before it is the ease with which media can be included in a lesson. Whether that means including sound files linked to words so that language students can hear a word's pronunciation, or embedding a video clip so that students can analyse a film scene's lighting and discuss how it affects the mood, the ability to drop a photo, sound or video into a lesson can dramatically change the entire dynamic of how students learn.

Again, none of this is new in the big sense. Teachers have always employed the use of media in their work. Photographs around the room, posters on the wall, use of audio cassette tapes or CDs and of course the use of television to show videos and DVDs have been an intrinsic part of the teaching landscape for many years. To say that IWBs have enabled the use of different media into a classroom would be somewhat misleading as all of these various media forms have existed for many years. What IWBs have done however is to aggregate these media forms, which have typically required various devices to use them, into a single, easily manipulatable digital format.

Because of the nature of digital resources, there is great flexibility in the way different media types can be handled. Photographs can zoomed into, audio can be stopped and started, video can be edited into relevant snippets, all far more easily than when these media forms existed in their old analog forms.

For example, high school English teachers are increasingly using film to teach literature. It's not uncommon to have students read a book and also watch the film of the book, selecting particular scenes from the film to analyse in detail. Doing this with a videotape or even a DVD is not so easy… locating the scene, pausing at certain points in the action, rewinding to dissect the dialog or action… these things should be simple to do but generally aren't, and can consume far more teaching time than they should. Not only that, but it can often be useful to compare a scene from one movie to a scene from another, looking at similarities and differences between the two. Juggling two or three DVDs during a lesson in order to find the scenes to compare can waste enormous chunks of class time.

The same task on an IWB is relatively trivial because of the way computers treat digital media. There is obviously some preparation work to do before the lesson, identifying the required scenes and isolating that footage into the desired clips, but once this is done they can be easily stored on the computer or dropped into a flipbook page ready to show the class. Students are able to watch the clips, stop, start, pause, rewind, compare and annotate with almost no fiddling about trying to find the correct place on the tape or disk. This makes for a far more focused lesson, with more time spent on the tasks of actually learning the important ideas around the literature and less time fiddling with the technicalities of managing DVDs.

7. Digging into the gallery

Most interactive boards have a built-in library of clipart-style images, photos, backgrounds, videos, sounds, shapes, lines and interactive simulations. These collections, usually referred to as a Library or Gallery, typically contain thousands of useful objects.

In the middle of a lesson and suddenly need a map of the world? You can probably find that map in the library. Want a diagram of a test tube or a bunsen burner? Need a symbol for a battery or a resistor? Want an image of a 50 cent piece? How about a diagram of a soccer field? Or a sound of a cow mooing? Or a video clip of a butterfly emerging from a cocoon? Need a visual way to show how gears work? Chances are you can find all of this, and much more, in your IWBs built-in library collection.

Most IWB resource libraries are structured around standard school curricula so their collections are full of educationally useful things. Get familiar with what's in there, because the big advantage is not merely the fact that the library has lots of resources… the real advantage is how easily these resources can be accessed during a lesson when you need them.

A word of advice… learn to use the search function. Although browsing might seem like an intuitive way to hunt around in there, the best method is to search, not browse. Each image in the library is tagged with keywords so that a search for the word "australia" will return all the resources in the library tagged with that

word, including maps, images of the flag, photographs of Australian animals and plants, a recording of the national anthem and so on. Naturally, you can limit your searching to specific media types if you prefer.

Finally, don't forget that you can add your own resources to the library collection, making it even more useful for your specific needs. Images of school crests and logos, photos of students, digital images taken on a field trip, recordings of student or teacher voices… these can all be useful additions to the library that enable you to easily access them when you need them.

8. Capturing their Attention

IWB software comes with some great tools for focusing attention of specific parts of the screen.

The screenshade is used to black out a screen and reveal it slowly to the viewers, much like the way a piece of paper can be placed on an overhead projector and moved down to reveal a line at a time (except these virtual screenshades do not blow away when you turn the fans on!). Screenshades can also be revealed from the top, bottom or sides, so offer an extra degree of functionality.

The spotlight tool is used to focus attention on a particular part of an image or specific words in a text. By isolating the non-essential parts of the screen and getting students to look carefully at the area identified by the spotlighted area we can encourage students to think more deeply about those particular aspects. If a rectangular spotlight is selected, it can be used to reframe an image's composition to encourage discussion about how our perceptions of an image can change depending on how much of it we see.

The other incredibly useful tool is the zoom or magnification tool. Often, part of text or an image can be quite detailed or small so the magnification tool is great for zooming in on those detailed areas, making them much easier to see especially for the students at the back of the classroom.

9. Math Tools

IWB software comes with a range of useful tools for teaching mathematical concepts, although non-maths teachers will almost certainly find uses for them

too. Maths classrooms have usually had large wooden rulers, protractors and compasses hanging next to the blackboard for years so the use of these tools is not a new teaching concept, but the IWB is able to replicate access to those tools and more with far greater flexibility and ease of use.

Random number generators, virtual dice, clocks, timers, stopwatches, fraction tools… all these and more are a standard part of most IWB software and can be used by teachers to help scaffold mathematical concepts in far more concrete ways. Using the board to draw and interact with shapes, measure angles, move clock hands, throw dice and so on can create powerful learning experiences for students.

10. Online Community and Sharing

In Australia, a huge library of educational resources is available through The Learning Federation, a federally funded project to build a massive repository of digital Learning Objects. These Learning Objects are freely available, developed by teachers for teachers, and work beautifully on an interactive whiteboard.

Then there the thousands of teachers, schools, education authorities, broadcasters, museums, universities and foundations all building resources for their own use and freely sharing them in extensive online communities. Websites such as Promethean Planet, Smart's Educator Resources and the Easiteach Educator Centre provide places where global communities of IWB users can freely and willingly share ideas and files with each other. The value of these online communities should not be overlooked and can be an incredibly rich source of inspiration for lessons.

There are obviously many ways that IWBs can be put to work in your classroom, and these 10 points are merely just to get you thinking about ways you might use the technology. There are no right or wrong ways to use an IWB… using them for something as simple as writing on in the same way you would use a conventional board is not necessarily "wrong", but nor is it tapping into the real potential that the technology offers. As you look over the list, think about how many of these techniques you are using. Ask yourself, "Do I use draggable objects?", "Do I integrate media in my lessons?", "Do I take advantage of layers?", "Have I ever

really looked through my Library?", "Have I ever visited the web community that supports my board?"

If you answer no to any of these questions, there is a whole world of exciting IWB opportunities awaiting you!

About the Author

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