Psychology Teaching

Interactive Whiteboard

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about this course

This course was designed in collaboration with Sarah Scarlett for delivery at Benton Park High School, Leeds on Friday 17th February, 2006.

Aidan Sammons teaches Psychology and lectures in Resource Based Learning at a general Further Education college in the Midlands. He has co-authored a number of textbooks and revision guides and regularly speaks at A – Level conferences around the country on matters including the unconscious motivations of George W. Bush, the use of sexual imagery in advertising and how to put your cat to good use if you lose the remote control for the television.

He set up psychlotron.org.uk in 2005 as a resource sharing site for Psychology teachers. It now hosts several hundred separate teaching resources on a large range of topics which it serves up, completely free of charge, to about 100 visitors a day. We are always looking for new resources to share.

If you want to share resources with other Psychology teachers around the UK, come to http://www.psychlotron.org.uk/ to find out more. If you want to discuss training provision (especially in the areas of ILT and RBL) please contact us at admin@psychlotron.org.uk.

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The Interactive Whiteboard

the hype and the reality

As teachers, we are exposed to a barrage of innovation that never seems to let up. Hardly a week goes by without some fashionable new set of ideas being thrust in our general directions, usually accompanied by assurances that its adoption will spell an end to whatever is presumed to be at the root of all problems as far as teaching and learning is concerned. Just recently it's been the turn of learning styles, multiple intelligences, assessment for learning and co-operative learning to name just a few. As a general rule, these innovations arrive on a wave of management enthusiasm, having been endorsed by one or other set of opinion-shapers, and before we know it we're all whisked off to a round of inset courses. Here, glassy-eyed evangelists extol the benefits of, say, Brain Gym, but come over all evasive when someone has the wit to ask whether there is any empirical evidence to support the extravagant claims they are wont to make. And, as a general rule, we go along to these courses, nod politely, collect a big pile of bumph and go back to what we were doing anyway, occasionally incorporating an insight or a technique or two into our classroom teaching.

Technological innovations are no exception. Like theoretical innovations, they tend to arrive on a wave of enthusiasm, accompanied by the promise that they are the magic bullet to put right whatever it is that is wrong with teaching and learning this month. The overhead projector, the wipe-clean whiteboard, the videocassette player, the rollerboard, the personal computer…all of these have, at some point, been held up as The Solution. Some of these technologies, like the TV & VCR, the OHP and, arguably, the personal computer, have found a permanent home in our classrooms. Other have not, a fact to which cupboards full of obsolete educational junk in schools and colleges all over the country bear mute but poignant witness.

the hype

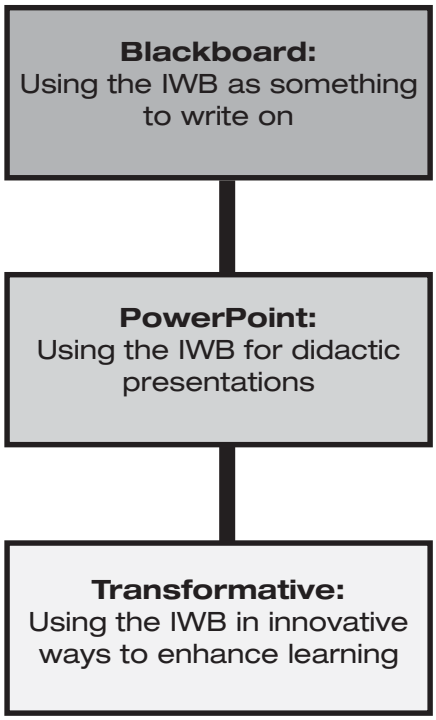
The interactive whiteboard (IWB) has arrived in the past few years on a familiar wave of hype. As usual, we are promised improvements to teaching and learning beyond what we could have dreamed. Browsing through a recent article on IWBs in secondary teaching, I was informed that they were 'the most powerful piece of educational technology introduced to the classroom in the past thirty years', and that 'they remove barriers, providing users and audience with a gateway to unlimited resources and knowledge'. I am being promised that the IWB is a 'transformative' and 'inspirational' technology. These things, we are told, are *good*.

the reality

I must admit to being sceptical about such claims. This is not because I'm unenthusiastic about technology. Quite the reverse: I was a geek long before I was a teacher. I am sceptical because I have not seen much evidence of the teaching and learning in my institution being transformed beyond recognition by the addition of IWBs to classroom walls. What I am seeing in my college is expensive equipment gathering dust. It has come to the point where, embarrassingly enough, when I am asked for recommendations about equipment spend in my department, I am actively discouraging the purchase of IWBs in favour of equipment that is likely to see some use.

None of this is the fault of the poor old IWB, of course. The problem is the way it has been sold to those who make the purchasing decisions in schools and colleges. A moment's reflection tells us that the presence or absence of an IWB in a classroom does not, in itself, affect the quality of teaching and learning, just as having a TV and video, or the Internet doesn't actually make a difference *per se*. Differences only occur in teaching and learning once we actually start to use the equipment. And when we do, the difference it makes can be bad as well as good. Yes, the IWB has the potential to bring a great deal into the classroom. But no, it will not, of itself, transform teaching. Only teachers can do that; the IWB is simply a tool that may or may not help.

A model of practitioner development



So why is the IWB not delivering so far? My research suggests that the biggest barriers in my institution are (1) the belief that the IWB is simply a gimmick of no real educational value; (2) a consequent reluctance to experiment with it and generate ideas about how it could be used; and (3) a belief that creating resources for the IWB is difficult and highly technical.

These general observations coincide with initial findings from larger scale studies of IWB uptake in schools. It appears that adopters of the IWB typically go through three stages in their development as practitioners. They start off by using it exactly as they would a conventional whiteboard or blackboard. They then discover PowerPoint, and use the whiteboard as a high-spec projector combo. There is nothing intrinsically wrong with either of these applications – except that neither actually requires an IWB. However, the 'transformative' power of the IWB is only realised once the teacher gets beyond the 'PowerPoint' stage and starts to use the whiteboard in innovative – and truly interactive – ways. The issue is that doing so depends on the teacher, not the technology and, unfortunately, most teachers get stuck at stage two.

It is not the aim of this course to transform you into a technologically expert and inspirational innovator. That depends on you and for me to promise otherwise would be disingenuous. What I hope you will get out of today's course are the following, more modest outcomes:

- To develop a critical framework for knowing when – and when not – to use the IWB
- To develop some criteria for evaluating existing IWB resources and planning new ones
- To develop and share ideas about how the IWB could be used in Psychology teaching
- To acquire some technical skills to create IWB resources simply and quickly

summary

Despite a good measure of hype, many teachers and institutions are discovering that the IWB is not the magic bullet they were promised. This should not surprise us, as the IWB is simply a tool whose impact on teaching and learning depends entirely on how it is used. Emerging evidence suggests that many practitioners are failing to move beyond using the IWB as an aid to didactic teaching. The aim of this course is to help practitioners move beyond this stage.

the benefits and the risks

The introduction of any new technology can bring benefits and advantages, but also involves risks and disadvantages. This is as true of the IWB as it is of any educational technology, perhaps more so, since the installation of IWBs in school classrooms seems often to come with the expectation that they will be used in virtually every lesson taught, something that was never true of the VCR or the PC.

As teachers, we need to be concerned about the impact of IWBs on at least two levels:

- The effect on the learning and attainment of our students
- The impact on our own working patterns

We should also remember that there are additional benefits and risks at an institutional level. On all these counts, IWBs have the potential to improve matters or cause them to deteriorate so at this point it is worth reviewing some of the main advantages and disadvantages of the technology from the points of view of learners, teachers and institutions. The lists that follow are far from exhaustive, and should be considered a starting point only. New considerations arise every time I discuss this with practitioners.

For the learners

Potential advantages	**Potential disadvantages**
Lessons are more engaging	Boredom (death by PowerPoint)
Activities are more fun	Confusion and distraction from learning
Learning is more effective	

For the teacher

Potential advantages	**Potential disadvantages**
Attracts learners and draws them in	Technology failure
Increased learner motivation	Time spent developing resources
Brings a greater variety of resources into the classroom	Time spent learning new skill sets

For the institution

Potential advantages	**Potential disadvantages**
Motivates teachers and learners	Resource drain (installation & maintenance)
Increased attainment	Makes bad teaching look good

Examining the many possible advantages and disadvantages associated with the IWB gives us a starting point for considering how we should try to integrate it into our teaching and how we should plan resources for it. Ideally, we want to maximise benefits and minimise risks. Consequently, we need to develop resources that engage the learners, make learning enjoyable and produce good quality learning whilst at the same time minimising our own outlay in terms of time spent learning new skill sets and actually developing the resources we use.

summary

Interactive whiteboards have advantages and disadvantages for the learner, the teacher and the institution. IWB teaching and resource development must aim to maximise the motivational benefits to learners whilst minimising time outlay for teachers and producing a return on their investment for institutions.

evaluating resources

In order to capitalise on the benefits of IWB technology we need to design effective resources. By examining resources that other people have developed for the IWB it is possible to come up with some evaluative points that can act as pointers to effective resource design. On the CD-ROM that accompanies this course are a few examples of resources I have developed for use in the classroom. The purpose of these is not to act as examples of how resources ought to be designed – they are far from perfect and at least one, in my opinion was completely unsuitable and a lot of time was wasted developing it. Rather, the approaches to resource design they represent can help you think about what works, what does not and, very importantly, what is worth doing. In the course of investigating these – and any other IWB resources you come across, it is very useful to ask yourself the following questions:

- How could I use this in my teaching (if at all)?
- What appeals to me, and what does not?
- What would I have added or done differently?

I recommend that you try to view as many different IWB resources as you can. As there is a paucity of commercially-produced IWB resources for Psychology you will need to rely on your colleagues to a great extent (which is why I recommend that you form a group for sharing and developing resources). You should also try to get a look at what is available in other subject areas. The primary and secondary national curriculum subjects are currently far better served by commercial resource publishers, so investigate what your colleagues have been using. The subject matter is not as important as the techniques used.

Evaluating a resource – and, consequently, designing a good one – requires you to think about two questions:

- Usability – can the learners or teacher interact with the resource appropriately and use it as intended?
- Learning – can the learners learn something (relevant) from using the resource?

usability

Clearly, these issues are interrelated: it is difficult to learn from a resource that you cannot use. Surprisingly, this area of resource development is often overlooked, even (or perhaps especially) by commercial resource developers.

Usability – Key Considerations

Text size – can the learners read it?
Colour scheme – does it aid legibility?
Image clarity – can you see what it is?
Audio clarity – can you hear it?
Transparency – is it obvious how it should be used?
Behaviour – does it respond as users would expect?

learning

Assuming that the usability hurdle has been overcome, it is necessary to think about what – if any – learning is stimulated by using the resource. This rather critical issue can easily get buried under the assumption that anything involving computers magically makes students learn. This assumption has been widespread in education since the early 1980s. It wasn't true then and it isn't true now.

> Learning – Key considerations
>
> **Content** – does it have clear learning outcomes?
> **Relevance** – is it what the students need to learn?
> **Accuracy** – is it factually correct?
> **Level** – is it pitched at the right level?
> **Differentiation** – does it cater for learners' diverse needs?

alternatives

Given that we are aiming to create resources that maximize the benefits of IWB technology whilst minimizing development costs (time and money), it is wise to add a third issue for consideration when evaluating and planning resources:

- Alternatives – given what went into obtaining/creating/using the resource, was it actually worth it?

Even if a resource passes with flying colours on the first two criteria, it often fails on the third. This is less of an issue with 'off the shelf' resources bought in from a publisher (although you may resent blowing even a small fraction of your budget on duff resources) but critically important when you are developing resources for yourself. It is, however, necessary to stress that what counts as 'worth it' is a very subjective thing. For example, a resource that required two hours work for ten minutes teaching might still be worthwhile if you can apply the skills you acquired to produce other resources more easily, or swap it with a colleague for blagging rights on all the Gypsy Creams in the departmental biscuit tin.

summary

The critical evaluation of existing resources is the best guide to developing better resources in future. Critical issues in evaluating and planning resources are (1) usability, (2) learning and (3) whether the learning achieved justified the time, money and hassle involved in developing, obtaining and using the resource. When assessing whether it is worth developing a resource, it is often worth counting your own skills development as one of the potential benefits.

a framework for resource design

So far, we have identified what we want out of our IWB resources and the minimum requirements they must meet in order to be useful. The final step is to develop some guiding principles for designing resources.

The first principle may seem obvious, but in my experience of training teachers in resource design, it's the most often ignored. I have therefore taken the liberty of putting it in a highlighted box so no-one can be mistaken about its importance.

> It's not about the whiteboard.
> It's not about the computer.
> It's not about the software.
> **It's about the learning.**

pedagogical not technological

The commonest – and most fatal – error, where it comes to resource design, and the IWB is no exception to this, is to forget why you're doing it in the first place. This happens when teachers get hung up on what the technology can or can't do, or what they can or can't do, and forget that the reason they are bothering in the first place is in order to create a learning experience for their students. I spend quite a lot of time helping colleagues develop ILT resources and I am forever having conversations that go something like this:

> **Colleague:** can we make it zoom around the screen?
> **Me:** yes.
> **Colleague:** can it make a whooshing noise?
> **Me:** yes.
> **Colleague:** can it be in 3d?
> **Me:** yes.
> **Colleague:** will you help me make it then?
> **Me:** only if you can explain to me how making it do all that will help your kids to learn more effectively.
> **Colleague:** ...?

The focus of IWB resource design must be pedagogical, not technological. Your emphasis must be on the learning you want the students to achieve. All other considerations are subsidiary to this. As long as you remember this guiding principle, you will remain on the right track and your resources will be better because of it.

keep the oucomes clear

This means approaching resource design as you would any other learning experience. Your resource needs to have an aim – what you want to teach – and a set of outcomes – what the students are going to learn. These need to be carefully formulated, so you can test them if necessary, and ideally should be linked to some species of learning theory.

It pays to approach IWB resource design from a theoretical point of view because the ways in which the learners can most obviously interact with it (pointing, clicking, dragging, choosing) do not obviously map onto the higher order cognitive

skills that students need to acquire to do well in Psychology. Consequently, you will need to ask yourself some hard questions, when you begin to design a resource, about how you are going to produce higher-order learning with a fairly limited palette of learner behaviours to choose from.

Possible behaviours	Desired outcomes
Read	Evaluate
Point	Analyse
Click	Apply
Drag & drop	Comprehend
Select	Recall

imagine first, implement second

It is very important, when designing resources, not to get distracted early on by technological considerations. It is far better to imagine the resource you would like to produce first, then start thinking about how to implement it. There is always a way to translate your idea into an IWB resource (although it may be more trouble than is worth it). Problems occur when you let your resource design be limited by what you think you or the technology is capable of. At that point the tail starts to wag the dog.

The best resources – like many of the best lessons – come from thinking carefully about the key issues before you start creating things. I do not recommend you start work on designing a resource until you have an answer to each of the following questions:

- Who is the resource for?
- What do you want them to learn?
- What is the teaching context?
- What will the resource consist of?
- How will the learners interact with the resource?
- How will they receive feedback on their learning?

These questions allow you to build up a mental picture of the resource before you start making it. Consequently, the resource you design will be better focused, increasing the probability that it will produce good quality learning.

maximise reusability

In addition to these considerations there are a few other principles that are worth following when you design resources. These relate primarily to maximising the value of your resource by allowing it to be used in as many different ways as possible. When designing a new resource – or thinking about whether to design one, I make several recommendations.

Avoid proprietary IWB software. There's nothing wrong with it *per se*, and some of it is quite useful. Unfortunately, there is no accepted set of standards for such software, so a resource developed for one make of IWB will not necessarily work on another make. This is most important where you have several different brands in the same institution (like many colleges) or are sharing resources with colleagues.

Maximize reuse opportunities. A resource that works well on an IWB might also work well on a computer screen, so keep an eye on whether you can develop a resource that you can recycle as an activity on your school or college virtual learning environment or intranet.

Share with colleagues. The best resource development opportunities are those that can be reused for different purposes. For example, you might be able to develop an activity that can be used in a number of different topics – or subjects – with little or no modification.

summary

IWB resource design should be focused on the learning, not the technology. The resource should be regarded as a distinct learning experience and planned in the same way as a lesson, thinking about the target audience and the desired learning outcomes. Technological considerations should only be brought in later, in order to avoid the technology dictating the learning rather than vice versa. Finally, it is useful, when designing resources, to maximise opportunities for reuse in other contexts, topics and courses.

Avoiding Death by PowerPoint

death by powerpoint

Look through the window of any classroom where an IWB has been fitted and the odds are pretty certain that, sooner or later, you will see someone using Microsoft PowerPoint. Some commentators (e.g. Edward Tufte in his influential essay 'The Cognitive Style of PowerPoint') suggest that this is necessarily a bad thing because of the restrictions on thinking that PowerPoint imposes. This is a rather extreme view. Like most things that find their way into the classroom, PowerPoint is neither a good nor a bad thing. Its impact on teaching and learning depends heavily on how it is used.

That said, two myths have grown up around PowerPoint's use in education that are worth dispelling before we go any further:

- Copying from a PowerPoint slide is inherently more interesting and worthwhile than copying from the board, or from a book.
- Text that flies in letter by letter accompanied by an annoying noise motivates the learner and results in superior comprehension and retention.

One of the most complained-about phenomena in teaching is the inset course where someone shows you 200 PowerPoint slides and proceeds to read through them whilst you chew off you own fingers with boredom. Given this, it never ceases to amaze me when I go to observe a lesson and see teachers doing exactly the same thing.

PowerPoint Possibilities

use **textboxes** to let the learners add their own content
use **hyperlinks** to:

- make a quiz
- make an interactive picture
- link to the web
- give your lessons a non-linear narrative

The trouble is, because it is easy to use PowerPoint, many people end up over-using it and/or using it badly. This is partly because PowerPoint tempts (but does not force) you to do things in certain ways. The software was originally designed for giving business presentations. Consequently, its default behaviour is based around a unidirectional, didactic model of communication between speaker and audience. This is not necessarily the model we want to bring into the classroom, and it represents precisely the opposite of what the IWB is supposed to be about. It places the teacher at the centre of things and encourages learners to view learning as the passive reception of information.

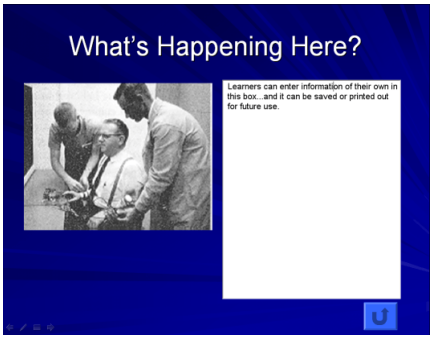
Just because this is PowerPoint's default behaviour it does not follow that we have to use it that way. With just a couple of tricks, it is possible to make PowerPoint into something you can interact with. At this point, masses of possibilities open up.

using text boxes

Part of the problem with PowerPoint is that it is not obvious how to modify presentations 'on the fly'. So to allow learners to insert their own content into a presentation involves either stopping yours and letting them modify it, or getting them to make their own presentations. Both of these options sometimes undesirable. However, they can be avoided through the use of text boxes.

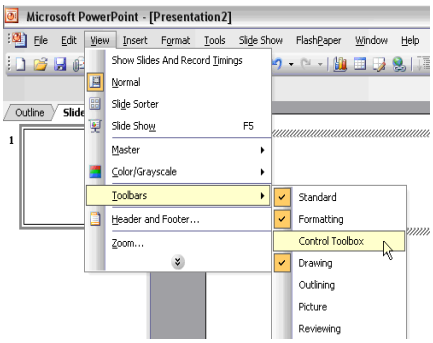
A text box is an example of an Microsoft control. Do not worry about what that actually means, just think of them as part of a toolbox that comes with Microsoft products that allows you to extend them in a variety of ways.

the text in the box can be modified 'on the fly'



A text box on a PowerPoint slide can be modified whilst the presentation is running. This means that learners can input their own material to pre-prepared slides. The text they enter into the text box is persistent, so it remains in place once the presentation has finished. It can be saved for another session, or printed out so everyone can have a copy.

make the 'controls' menu visible'

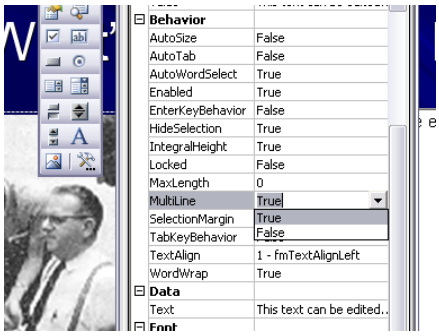


To put a text box on a PowerPoint slide, you must first bring up the 'controls' menu. Do this by selecting **View>>Toolbars>>Control Toolbox** .

the controls toolbar

Select 'text box' by clicking on the text box icon. This allows you to draw the textbox onto your slide by clicking and dragging (the mouse cursor turns from an arrow to crosshairs while you do this).

set the ‘multiline’ property to ‘true’



Once you have adjusted the text box to the appropriate size, right click on it and select ‘properties’ from the menu that appears. You need to make sure that the ‘MultiLine’ slot is set to ‘true’ (if you do not do this, the text entered into the box will not wrap around to the next line.

When you run the presentation, text can be entered into the box by clicking with the cursor and typing (or using the screen keyboard that comes with your IWB software).

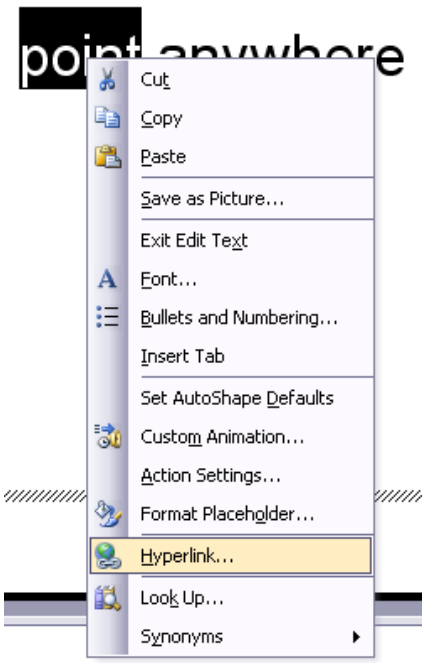
using hyperlinks and the web

Another way to make PowerPoint interactive is to use hyperlinks. You will be familiar with these if you have ever used the World Wide Web. A hyperlink is a little ‘pointer’ embedded in a document that opens up another document. Hyperlinks are incredibly versatile. They can point to a document in any location you want including:

- Another place in the same presentation
- Another document on your computer
- A resource on the college network
- A resource on the internet

Because you can have many hyperlinks on the same slide, and because you have a great deal of flexibility in what they look like and where they point to, you can start to make resources whose behaviour depends entirely on how the learners use them – which is what interactivity really means.

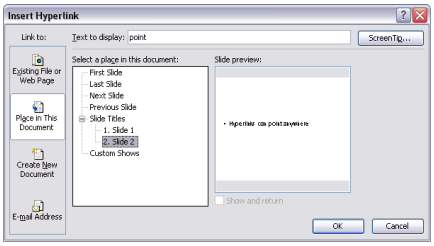
highlight and right click to insert a hyperlink



Inserting a hyperlink is very easy. First, you need to highlight the object on the slide that you want to attach the link to. This could be a word, a picture or a shape. The ‘autoshapes’ menu on the graphics toolbar allows you to draw ‘action buttons’, which are specially designed for use with hyperlinks.

Once you have highlighted the object that will be hyperlinked, hover the mouse pointer over it and click with the right mouse button. A menu will appear. You need to select the option marked either ‘hyperlink’ or ‘edit hyperlink’.

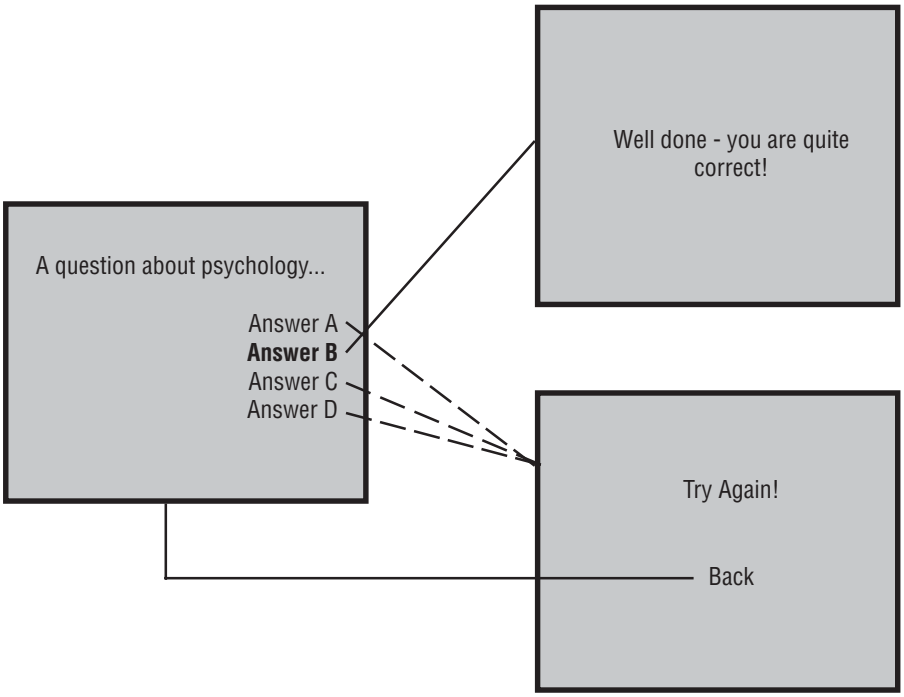
Choose where you want the link to point to



A dialogue box will then appear, allowing you to choose the location or document that you want the new link to point to. The exact appearance of this dialogue depends on which version of PowerPoint you are using.

a quiz

The simplest application of hyperlinks is to create a multiple choice quiz. You need to set up a slide containing a question and a number of possible answers. You need to set up two further slides, one telling the learner they are correct and another telling them to try again.



Once these slides are set up it is simply a matter of inserting hyperlinks that point either to the 'well done' slide in the case of the correct answer or the 'try again' slide in the case of the incorrect answers. Repetition of this procedure can create an entertaining quiz (e.g. you can dress it up to look and function like the TV programme 'Who Wants to be a Millionaire').

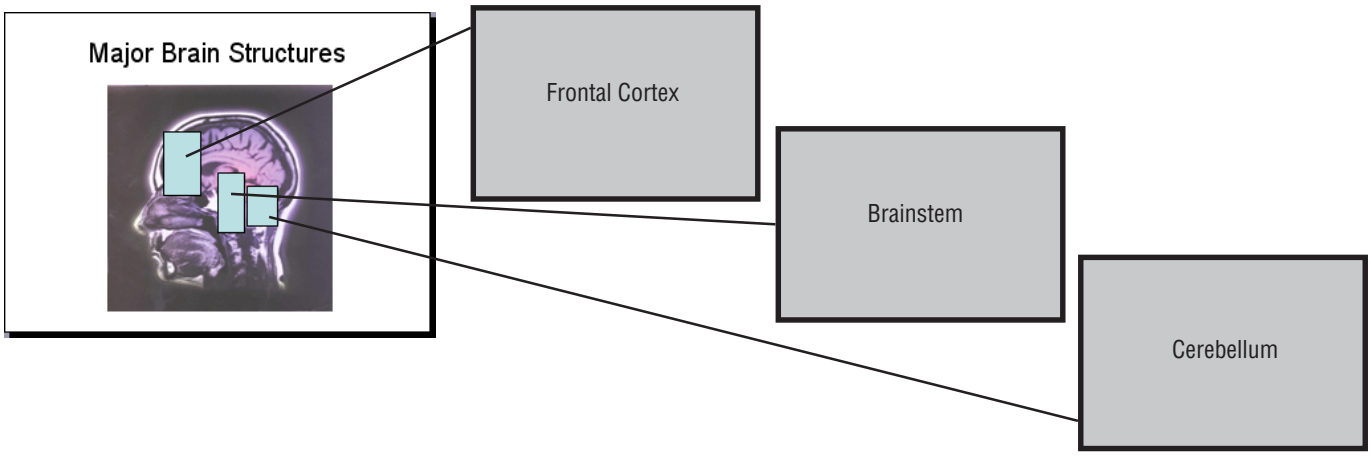
an interactive picture

Another fairly simple application of hyperlinks is an interactive picture. This is a picture that learners can touch to find out more about something. Where they touch it determines what additional information is displayed.

To make an interactive picture, you need to start with an appropriate image. Make sure it is large and detailed enough to display well on your IWB. Put the image on a slide, and make a series of additional slides containing the extra information you want to present.

Now use the autoshapes menu to draw a number of rectangles over your image. These rectangles will correspond to the areas that learners can touch to interact with the picture, so make sure you position them carefully. Once you have placed as many rectangles as you need, hyperlink them to the different slides in your presentation. It's a good idea to have a 'back' button on each slide that hyperlinks back to the image.

The blue rectangles are hyperlinked then made invisible



The final step is to make the rectangles invisible. Do this by right clicking on each one and choosing the option 'format autoshape'. This brings up a dialogue box where you can change the colour of the shape. Set the 'fill' option to 'no fill' and the 'line' option to 'no line', then press 'OK'. The shapes will disappear, leaving only the image. However, the hyperlinks are still active, meaning that you can now click on different regions of the image and obtain a corresponding response.

link to the world wide web

Because hyperlinks can be pointed at any resource the computer can connect to, they are the ideal way of bringing together different resources. Some or all of these resources can be on the World Wide Web, so this gives you an opportunity to bring the web into the classroom.

The web is full of psychology resources and more are added daily. Some of them are fantastic for using with the IWB in a lesson, some less so. The variety of resources is so vast that it is impossible to discuss here the many different ways in which the web could be used with the IWB. Some links to my favourite web resources are included on the CD-ROM, but really your best bet is to investigate for yourself and compile your own list of favourite links. However, it is worth bearing in mind the following points:

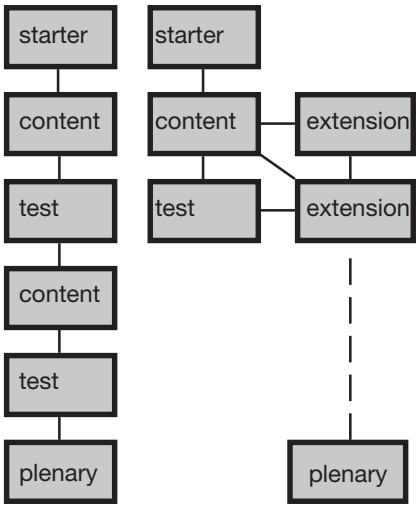
- Most material on the web was designed for individuals reading from computer screens. It might be hard to read or see when displayed on an IWB. Better designed sites will allow you to alter text sizes etc. but not all will.

- On the web, stuff often moves around or disappears completely. Make sure you keep your list of links up to date. If there's something you really like it can be a good idea to download and save your own copy, if possible.
- Be really careful with your hyperlinks. The producers of questionable sites often buy links that are typos of popular sites or words, which they then link to pornography or other stuff you don't necessarily want in your classroom. Check all your links carefully.
- Be aware of your institution's web-filtering policy, and secure the relevant permissions in advance. It can be very frustrating trying to use web resources on Freud when your school has blocked the word 'penis'.

branching narratives

All of the techniques we have looked at so far have involved using hyperlinks to create resources or learning experiences that are embedded within a more traditional lesson. It is possible to go much further. We are used to thinking of lessons as having a linear narrative. They start with a set of aims and proceed through a series of sections until you get to a plenary, whereupon (it is hoped) the learners have achieved all the outcomes. This is good, sound, Tyler-model stuff, DfES-approved and lovingly practiced the length of the land. There is absolutely no reason why you should want to deviate from it.

hyperlinked resources can create a non-linear lesson



Unless you like experimenting and want to try giving the learners more control over what and how they learn. If you're anything like me you are an inveterate resource-hoarder, who never throws anything away. Assuming you have (or are prepared to make) a reasonable amount of resources in electronic form you can use the power of hyperlinks to link them all together. With sufficient planning and only a little time you can put together a set of resources that allow the learners to create their own branching lesson narrative.

This sort of approach requires a fair amount of planning as you will need to think about the different paths your students will be able to take through the learning and how you will manage the choice process whenever a branch in the lesson narrative occurs.

summary

Text boxes and hyperlinks can turn PowerPoint from an evil tool of didactism to a garden of interactive delights. They are simple techniques that, when creatively applied, allow you to design quizzes and interactive pictures, integrate web content into your teaching or even to give your lessons a branching, non-linear narrative. It is fun to experiment, but make sure you still plan properly.

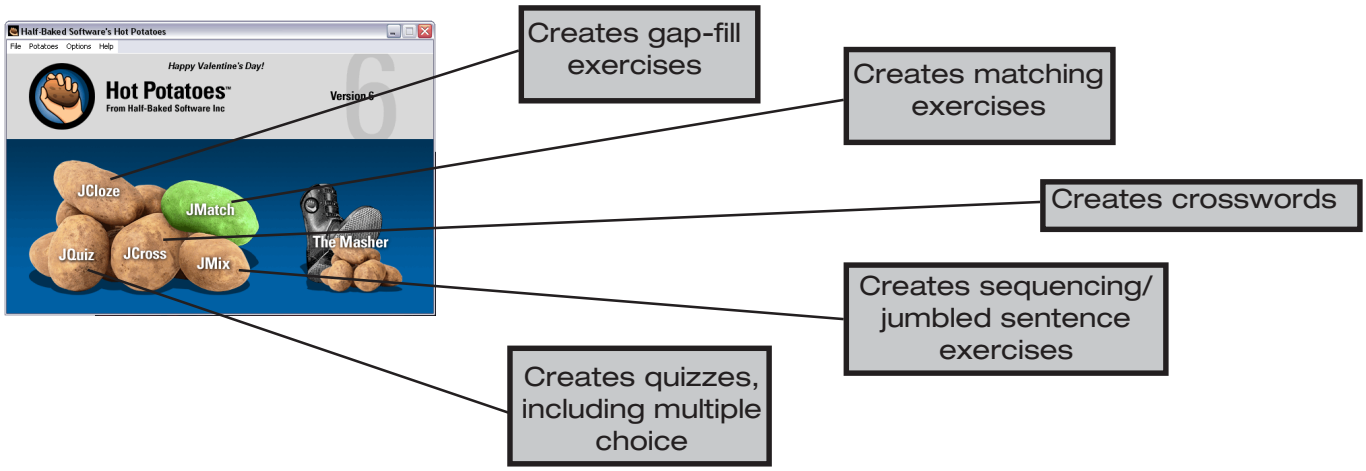
Making Interactive Resources

One of the biggest drawbacks of developing your own IWB resources is the amount of time it takes. Sometimes the amount of work involved in creating even a simple quiz can seem unreasonable for what you get out of it. It is therefore very useful to have some software that helps you create interactive resources with the minimum of hassle.

hot potatoes™

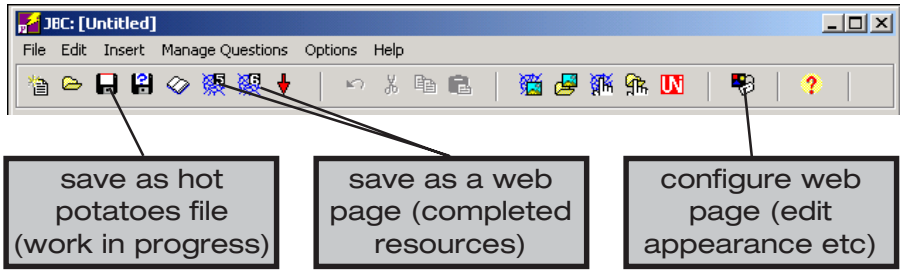
The software I recommend for this is Hot Potatoes. This is a suite of programs developed by the University of Victoria Humanities Computing and Media Centre. They can be used to make a variety of interactive resources which can be used for the IWB (amongst other things). Hot Potatoes is not free software. A non-paying user license is offered to teachers working in state-funded education provided they freely share the resources they make on the world wide web (for example, by putting them on your school or college website, or sending them to a resource-sharing website like psychlotron.org.uk or Hot Potatoes' own site. An installer for the latest version of Hot Potatoes is included on the CD-ROM. You will need to install it on your computer and register it in order to enable all functions.

hot potatoes contains five different programs



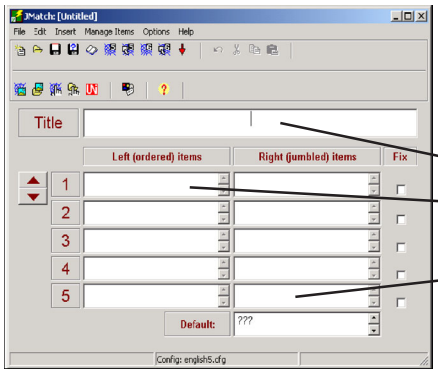
Hot Potatoes creates HTML and JavaScript files as output. These can be then be read by almost every web browser (e.g. Microsoft Internet Explorer) making them easy to use with your IWB.

Hot Potatoes is very straightforward to use if you are used to Windows programs. There are a few functions that will be unfamiliar.



An important thing to be aware of is that Hot Potatoes produces two different types of file. Hot Potatoes files are editable using the program. Web pages are finished resources that you can use in a web browser. It is important to save every resource in both formats. This is so you can use it in the classroom but still go back and edit it later if you want.

jmatch



JMatch is the Hot Potato that produces matching tasks. These can be output as web pages with either 'drop down' choice menus or with drag and drop capability.

- Open JMatch from the Hot Potatoes menu.
- Give your matching task a title.
- On the left, type in the fixed position items (e.g. a list of terms from a topic).
- On the right, type in the corresponding matching items (e.g. the definitions of those terms) that will appear jumbled up.
- You can insert pictures if you wish. For best results, these should be saved to your hard drive and formatted beforehand. Use the 'insert picture from hard drive' button to do this.

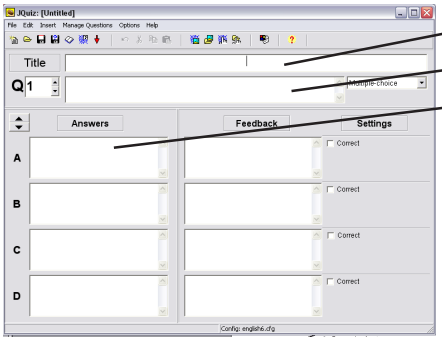
- Set up the web page using the 'configure web page' button. I recommend that for IWB use you set appearance to light text on a dark background, with text size set to 'large', 'x-large' or 'xx-large'

- Save your work.
- Export a web page by using either of the export buttons (the one on the left will give you drop down menus, the one on the right will give you drag and drop matching).

- Choose a filename to save your resource under.
- View your resource in your web browser to check that it works properly.

jquiz

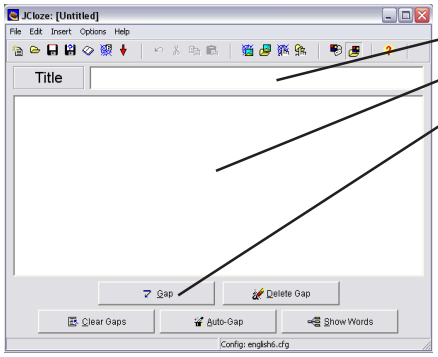
JQuiz is the Hot Potato that produces quizzes and tests. It is capable of both multiple choice and short answer quizzes. I recommend you start with multiple choice quizzes in 'beginner' mode (this is the default setting)



- Open JQuiz from the Hot Potatoes menu.
- Give your quiz a title.
- Type your first question in the 'question' box.
- In the boxes below, type the answers the learner will choose from.
- Select the correct answer by clicking on the checkbox.
- Enter more questions as required.
- Set up the appearance of the quiz on the whiteboard (see instructions for JMatch).
- Save your work.
- Export a web page using the export button.
- Choose a filename and save your resource.
- View your resource in your web browser to check that it works properly.

jcloze

JCloze is the Hot Potato that produces gap-fill exercises. These have less immediacy as IWB activities but there is a place for them. JCloze allows you to specify alternative right answers (useful with poor spellers) and give hints if you wish.



- Open JCloze from the Hot Potatoes menu.
- Give your gap-fill exercise a title.
- Type a series of sentences.
- Select a word you want to 'gap out' and click the 'gap' button. A dialogue will appear where you can specify a clue and some alternative right answers.
- When you click OK the dialogue will disappear and the word you gapped out will appear underlined in red.
- Gap out as many words as required.
- Set up the appearance of the quiz on the whiteboard (see instructions for JMatch).
- Save your work.
- Export a web page using the export button.
- Choose a filename and save your resource.
  View your resource in your web browser to check that it works properly.

summary

Hot Potatoes is a suite of programs that can be used to generate interactive exercises and resources. It can be used to make matching and gap-fill tasks and multiple choice quizzes in minutes, with a reasonable degree of control over how the resource looks and behaves. It is probably the most efficient resource creator currently available.

dazzle™ video capture device

A big advantage of the IWB is the ability to display and manipulate hypermedia. For any given topic or concept, you might have a whole range of resources – text, images, film clips and so on – that could potentially be joined up using hyperlinks.

Almost all the Psychology teachers I have ever met have a stock of videos, sometimes going back decades. Most of them have a set of favourite clips that they use over and over again because they make a point or illustrate a concept so eloquently. Most of these clips are on videotape, which is becoming problematic for a number of reasons.

- The tape is deteriorating. Despite the assurances of the Scotch Tapes skeleton, video tape does not last forever and some of my personal collection is close to unplayable.
- Video players are now obsolete. It is becoming increasingly difficult to buy one in the age of the DVD.
- The video player is a substantial piece of kit that can be difficult to move about and clunky to use, especially if you want to show a series of short clips.

I have therefore found it useful to digitize a collection of my favourite clips. This has put my mind at rest, as I can make infinite copies with no loss of quality. Additionally, it has allowed me to use video clips in all sorts of new ways, by embedding them in the resources I make.

The equipment I use for this is the Dazzle Digital Video Capture (DVC) device, manufactured by Pinnacle Systems. It comes in a range of specifications and prices start at about £50 for a basic device that can capture video at low resolution. Although it is not the only DVC device on the market, the Dazzle is my personal favourite because:

- It is very cheap.
- It captures analogue video.
- It is a USB device, so I can use it with my laptop.
- It is small (my DVC80 fits in a pocket)

If my demonstration of the Dazzle DVC interested you, find out more on the web at www.pinnaclesys.com

avenues for development

The skills you have developed today will take you quite a distance where it comes to designing your own IWB resources but it may be that you have some more ambitious ideas. And if you don't now, it is likely that you will in the future. So you may be wondering where to develop from here and what sorts of skills you will need to acquire in order to create more ambitious resources. Here are a few suggestions for routes you could follow.

microsoft office

Microsoft products we all use, like PowerPoint, Word and Excel have (as you might have realised today) a great many powerful functions that are hidden from the average user who only wants to type, calculate or present information. Advanced functions can be used, for example, to create complex interactive dialogues between resource and user or to animate pictures according to the manipulation of different controls. One route to developing more advanced resources is to learn more about the advanced side of Microsoft Office applications. Following this route will eventually require you to learn some Visual Basic for Applications (VBA), a simple programming language used to create macros and user dialogues and to process information in certain ways.

Find out more on the Microsoft developers' website:
msdn.microsoft.com/isv/technology/vba/

macromedia flash

Alternately, particularly if you're of an artistic bent, you could learn to use Macromedia Flash. This is an animation package that supports a reasonable level of interactivity. It is a professional product favoured by designers (the commercial educational publishers generally use it or its close cousin Shockwave). That means it is not straightforward to learn: you need to master drawing and animation tools and a simple programming language. However, it can be used to create very slick resources and the skilled user can produce results very quickly.

Macromedia (now part of Adobe) publish Flash as a stand alone package but it makes more sense to purchase Studio 8, which contains Flash, Dreamweaver (the industry standard web-design package) and various other goodies. With an educational discount (which means you can't use it for commercial purposes or install it on institutional machines) Studio 8 costs around £95 from www.pugh.co.uk

Find out the sorts of things you can do with Flash at
www.flashkit.com

javascript, CSS and DHTML

The hardest route, but the one that gives you the most versatility in the types of resource you create and the ways you use them, is to learn some web scripting languages. Web pages are written in HTML and CSS (this is what you see if you go to a web page and select view>>source from the menu). Interactivity on web pages can be introduced using a powerful scripting language called JavaScript. This approach to resource creation takes the longest to master and produces results the slowest, as you have to learn how to write computer programs. However, it gives you the most flexibility and versatility where it comes to resources and interactivity. Additionally, once you know one programming language it's quite easy to learn another, so after learning JavaScript you can pick up VBA or Flash scripting in a couple of hours.

Find out more about HTML, CSS and JavaScript at:
www.w3schools.com/js/default.asp