Royal
Geographical
Society
with IBG

Advancing geography
and geographical learning

STRAIGHTFORWARD USES OF IWBS IN GEOGRAPHY

Copy of PowerPoint Page Notes

Page 2

IWB technology is a significant component of the wider technology infrastructure found throughout educational institutions nowadays. Teachers who use IWBs can work more effectively, because they are freer to engage with their students and have more flexible access to tools and resources to respond to learners' needs. When used appropriately, IWB technology allows lessons to be more dynamic and teachers to engage more effectively with learners. Clearly an initial investment of time is required when preparing 'flipchart' lessons for IWBs, but once created, flipcharts can be saved and used again - ideally improved following review, reflection and updating.

Page 4

The use of the transparency tool allows the picture to be faded sufficiently to allow clear reading of the text - without losing the impact of the image.

Sans Serif fonts - either Arial or Comic Sans - prove to be particularly effective when projected - especially when displayed against a 'sky and clouds' or dark shaded background.

Research at Lincoln Minster School (2008) showed a majority of students (54%) choosing 'dark blue' or 'cloudy sky' as their preferred background colour. In practice, however, teachers should be encouraged to ask students within their lessons which background colours are preferred - not least given the subtle changes of lighting conditions and reflections affecting the IWB, depending on the room used.

Page 8

This straightforward technique, chosen to illustrate promotion of high order discussions, involves student manipulation of pre-prepared text boxes as a

stimulus to evaluating the advantages and disadvantages of out-of-town retail centres. The exercise is illustrative of many Sixth Form discussion situations demanding individual, justified resolution of potentially contentious problems. As in all such decision-making exercises, appreciation of contrasting points-of-view, evaluation of facts and/or statistics, and prioritizing of data promote in-depth comprehension and understanding - and allow longer-term recall of salient arguments for examination at a later stage.

In short, debate involving all can be celebrated - promoting student appreciation that whilst no one solution is either realistic or expected, command of facts and appreciation of alternative points-of-view is central to making and articulating a convincing decision.

Page 9

Twenty-one statements relating to decentralisation of shops from city centres into peripheral retail and business parks are typed within individual text boxes using a coloured background. Text box background colours are irrelevant at this point in that during the discussion they may be colour-coded to signify 'Pro', 'Con' or 'Debatable'. Ideally, each statement is concise enough to comprise only one line. Furthermore, enough of a blank background has to be left at the end (to act as a tag) when the text boxes are stacked off the edge of the IWB. Two bold headings ('Pros' and 'Cons') are typed onto the top and middle of the board respectively.

Page 10

To make a text box click on the main whiteboard screen menu's *Text* icon. Select *Rich Text* and type in the text required – whether for example labels, annotation, notes or an extension exercise[1]. As with straightforward word-processing, the text font, its size and background colour may be selected by clicking on the relevant icons, although Sans Serif fonts are always advisable for projection. Also, if necessary, the size and shape of the text box can be altered, by dragging the side and corner icons. Press *Enter* or *OK* and the completed text box is fixed and can be dragged anywhere across the screen. By dragging almost completely off the screen enough of the background colour can be left showing at the edge[2] to allow the teacher to grab it again and drag it back on screen when the need arises.

Such pre-prepared text boxes can be 'hidden' off screen and 'dragged in' for a wide variety of uses. For example, instructions may be included for set tasks - such as homework or extension work. This is particularly useful given the different pace at which students work, and the 'fixed' nature of one page per screen at any time.

1. Extension work text boxes allow the teacher to stretch high achievers. They also create teacher time to support the least able - whilst basics are reinforced and practised by the majority. Remember, however, that the skill in developing effective extension activities is nothing to do with IWBs and everything to do with good teachers planning dynamic lessons, knowing and enthusing their students. If ill thought out or over-used, extension exercises can be counter-productive – at worse gratuitous extra questions used as classroom time-fillers leaving all but the most self-motivating pupils idling their time away in doing the bare minimum.

2. The hidden text box (to drag in) need not have a background colour - providing the teacher always hides them in a set place off screen. This helps maintain the surprise element simply because the pupils see no 'tell tale' coloured box edge.

Page 11

The benefit of this approach is that the teacher need not direct the discussion from the front of the room. In practice, far more stimulating debate and participation is encouraged through students volunteering to operate the IWB. This ensures that text box selection is entirely random and the teacher is released to participate amongst the student body (to guide and forward the discussion if required or support individual students). Each text box, on being dragged in, can then be explained and argued as required prior to being assigned to the 'Pro' or 'Con' section of the board.

In practice, only statements where debate continues to become counter-productive benefit from colour coding. Highlighting in yellow before dragging them to the other side of the board for re-evaluation at a later stage is useful, especially once the lesson progresses to the concluding stages of summarizing key arguments to, for example, a maximum of five 'Pros' and

five 'Cons'. Deleting discarded statements clears up the board to allow space for fresh consideration of those highlighted 'Debatable'.

Page 12

Paper lists of all statements may be prepared to assist individual student 'write-ups' by simply dragging all text boxes (preferably in Arial) on to a fresh page and clearing all backgrounds (to white) prior to printing, copying and guillotining as desired. The benefits and application of this technique are widespread – for extension, homework or other instructions across Key Stages. Furthermore, following review and departmental sharing, the text boxes may be subsequently edited, updated and refined with ease.

Page 15

The basic drawing (image), complete or as an outline, can be printed in worksheet form for tracing, copying or working on directly - as appropriate to the needs of individual students. Simply copying the flipchart page, before removing the background, allows as much editing as required.

During the lesson class responses will dictate how the diagram is labelled and annotated at stages during the teaching.

Finally, a completed, saved diagram, including labels and annotations with links attached to both photographs and video clips (illustrated in later examples) may be used for student checking, and both review and revision in subsequent lessons.

Page 16

The dynamism of topics such as volcanoes and earthquakes can be brought instantly into the classroom with a pre-prepared web-link to an active volcano, digitised video or DVD. Some very good websites exist, including the excellent *Volcano World* (http://volcano.und.edu/).

Page 17

Before the lesson a simple outline block diagram of a hypothetical composite cone is drawn freehand - using stock annotations provided in the software. Of key importance is that the finished outline has no gaps.

Page 18

During the lesson explanation, of how successive eruptions build a volcano, the diagram is filled with colour (using the *Fill* tool). Class responses may be used to annotate the diagram at stages during the teaching.

Page 19

Differentiated paper copies of IWB notes allow individual students within mixed-ability groups to work at their most appropriate level - leading the whole class to conclude exercises at around the same time.

Notes in full prose summarising, in this case the explanation of hurricanes, are typed on to the IWB. Using '*copy'*, '*edit'* and so on, vocabulary, syntax (such as bullet-pointing) - not least background and font can be adapted readily for the production of both projected review exercises (Page 21) and print masters for differentiated paper prompts (Page 22).

Experience suggests that around three levels is usual, in addition to large-print versions for literal 'cutting and pasting', if required. For example, typical differentiated handouts, for the completion of notes (following a whole-class topic taught from the front) might include:

❑ completion of simple structured sentences with key words given

❑ completion of more demanding prose without key words

❑ key words given with sub-headings followed by a blanked-out text box to suggest volume of content.

Which (if any) of these differentiated materials are projected, ultimately, in whole-class review requires discretion.

Research at Lincoln Minster School (2008) examined student perceptions as to the helpfulness and fairness of differentiation. A majority (53%) of students found this to be 'quite' or 'very helpful', although, notably, 26% recorded 'I don't know'. Similarly, 55% of students found this to be 'fair' or 'very fair', with 28% recording 'I don't know'. Furthermore, the correlation between helpfulness and fairness proved to be highly significant. Such responses suggest real value in differentiating - important to appreciate given the time-consuming nature of preparing such materials, and the logistical problems of discrete classroom dissemination amongst the students.

Royal Geographical Society
with IBG
Advancing geography
and geographical learning

Research at Lincoln Minster School (2008) demonstrated that careful thought has to be given to the volume of text shown at any one time on an IWB. 53% of students recorded that copying long notes was 'quite' or 'very easy', involving 'rarely' making mistakes, if any at all. However, the overwhelming 87% of students recording similarly positive responses, when questioned on copying short (such as summarizing) notes, is a very clear statement as to the value of this practice.

One question asked how helpful it was, following teaching of a topic, to have a paper copy of the IWB notes and options when copying and completing notes. Whilst a majority of students (52%) found this to be 'quite' or 'very helpful', 23% recorded 'I don't know'. Classroom experience identifies very clear value in appropriately designed paper copies when catering for both lower-ability students and those with visual impairments.

Furthermore, on this theme of IWB notes, another question examined the use of the *reveal tool* (IWB blind) to expose text in sections. 40% of students found this to be 'useful because it helps me to keep up' with a further 15% finding it 'useful because it helps me to check my copying'. Given only 12% recording 'I don't know' the value of this practice is clearly evident.

Page 21

Research at Lincoln Minster School (2008) examined student perceptions regarding copying and completing notes with 'lottery-style' scratch cards blanking out key word options. Overwhelmingly positive responses were recorded - with 65% of students finding it 'quite' or 'very useful' and 69% finding it 'quite' or 'very helpful'. Furthermore, the correlation between the responses proved to be significant. This all represents encouraging confirmation of the value of this particularly useful technique, especially when adapted to allow differentiation of task.

Hyperlink (hotspots) are powerful tools, particularly when used creatively. Hyperlinks can be made to most file types, including web pages (including, if appropriate, saved 'off-line' web pages), audio and video files. Furthermore, existing electronic resources from home, including word-processed resources, may also be linked to. Still images are thus able to 'come alive' as students interact with the content on the IWB. Images can, for example, be scanned in from the students' textbooks - so supporting more familiar self-study.

Research at Lincoln Minster School (2008) examined student perceptions as to the use of hidden hyperlinks to pictures, websites and video clips. Predominantly positive responses prevailed (with 58% of students finding the teacher using these links helping understanding 'quite a lot' or 'a great deal more' and 47% when operating the IWB themselves).

Page 23

Drag-and-drop labels (text boxes) stacked at the bottom of the page, test both knowledge and understanding. The *'copy page'* command allows a diagram with completed labels to be saved. Hyperlink (hotspots) on these labels are then linked to photographs, live web pages (saved off-line) and so on.

Page 24

Return hyperlink (hotspots) link back to the diagram, so maintaining the pace of the lesson.