



Becta's ICT Advice services for teachers

Becta's ICT Advice service is an integrated provision of support and advice to schools. It offers timely, free and impartial advice on the implementation of ICT through a range of different services.

To keep up to date with Becta's ICT Advice service, register for the ICT Alert, a monthly email newsletter [www.ictadvice.org.uk/newsletters].

The ICT Advice website [www.ictadvice.org.uk]

The ICT Advice website is the 'core' of Becta's advice and support to schools. It is the place to access online content and services and to find out more about the events and opportunities offered by Becta's ICT Advice service for schools.

Aimed at classroom teachers, subject co-ordinators, ICT co-ordinators and special needs co-ordinators, the website is where you will be able to access all of the advice and support relevant to your professional needs.

The ICT Advice service consists of the following key features:

Direct access to national experts through the 'Ask an Expert' service
[www.ictadvice.org.uk/experts]

The Ask an Expert service offers support and advice to enable practitioners to make appropriate decisions about ICT-related issues or problems. You are able to pose questions directly to national experts through the ICT Advice site. Each month the site hosts two topical themes which focus on curriculum and pedagogy. The themes are advertised in advance through the site and our newsletters.

Developing ICT skills and confidence through the 'New2Computers' service
[www.ictadvice.org.uk/new2computers]

New2Computers is for those teachers who are just starting out with computers. The service offers direct online advice from friendly mentors via tutorials, a chat room and an email forum. If you are totally new2computers, you can join the 'newts' area, which offers sample missions to support the development of ICT skills.

Sharing good practice in the use of ICT in your subject through a programme of face-to-face national conferences

[www.ictadvice.org.uk/ictadviceevents]

Events at venues all over the country will be happening over the next year to support the use of ICT in subject teaching. Becta's ICT Advice services will be offering advice and support events, with additional subject specialisms being provided by the relevant subject associations.

Supporting continuing professional development in the use and implementation of ICT through online events and insets

[www.ictadvice.org.uk/ictadviceevents]

The online events and insets provide lesson resources, ideas and advice. Users are able to log on in advance, view and try out materials, and then ask for support from the content authors at a pre-arranged time.

Keeping up to date with the latest news and sharing good practice through online and offline newsletters [www.ictadvice.org.uk/newsletters]

Find out the latest ideas and learn more about integrating ICT into your subject through our online and offline, termly and monthly newsletters.

Exchange information and talk to other practitioners through online discussion forums
[www.ictadvice.org.uk/talk]

The 'Talk' area of the ICT Advice website is where you will find a wide range of discussion forums on different aspects of ICT. By joining a forum, you can exchange views, ask questions, provide answers and just generally share classroom experiences with other teachers.

Supporting the use of ICT in schools through offline publications
[www.ictadvice.org.uk/orders]

In addition to providing online advice, a range of print publications is available free of charge. You can order any of our publications, leaflets and CD-ROMs from the above web address.

About Becta

Becta is the Government's lead agency for ICT in education. It supports the UK Government, national organisations, schools and colleges in the use and development of ICT in education to raise standards, widen access, improve skills and encourage effective management.

While every care has been taken in the compilation of this information to ensure that it is accurate at the time of publication, Becta cannot be held responsible for any loss, damage or inconvenience caused as a result of any error or inaccuracy within these pages. Although all references to external sources (including any websites linked to the Becta website) are checked both at the time of compilation and on a regular basis, Becta does not accept any responsibility for, or otherwise endorse, any information contained in these pages, including any sources cited.

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what are
presentation
technologies?





High-quality direct teaching is oral, interactive and lively. It is not achieved by adopting a simplistic formula of 'drill and practise' and lecturing the class, or by expecting pupils to teach themselves from books. It is a two-way process in which pupils are expected to play an active part by answering questions, contributing points to discussions, and explaining and demonstrating their methods to the class.

Advances in technology mean that ICT can now play an important role in the classroom, supporting the teacher and enabling whole-class interactive teaching. Presentation technologies enable the whole class to enjoy the benefits of digital resources while preserving the teacher's role of guiding and monitoring learning. Directing, instructing, demonstrating, questioning, discussing and consolidating can all benefit from appropriate presentation technology.

The common element in all the following presentation technologies is that they enable the text and images on a computer screen to be magnified to a size that can be seen by the whole class.

Television screens

A computer can be connected to a large television screen by a cable or converter box. The advantages are that television screens are relatively inexpensive and utilise existing resources. However, a television screen offers lower resolution than a computer monitor, so highly detailed material can be difficult to see.

Large-screen monitors

The largest commercially available computer monitor measures about 95cm (38 inches). This can be connected to the computer in the same way as a standard monitor.

LCD panels

A liquid crystal display (LCD) panel connects to a computer and is placed on top of an overhead projector (OHP). The image can then be projected on to a screen, whiteboard or plain wall.

Plasma screens

Plasma screens are large, flat monitors 7 to 15cm (3 to 6 inches) deep with screens that range from 80 to 125cm (33 to 50 inches) in size. They accept both data and video signals and can therefore be used as computer or standard video displays.

Data projectors

A projector connects to the computer and projects the image directly onto a screen. Data projectors accept both video and computer digital output signals, and can provide large-screen displays with much higher resolution. Prices are falling, and LEA bulk purchasing can reduce the price even further. Generally, the price tends to reflect the data projector's resolution, brightness and weight.

Most projectors use liquid crystal display (LCD) technology, but a new technology, digital micro-mirror device (DMD), is transforming the performance of projectors, offering greater clarity and brightness. The advantages of data projectors are:

- They can be portable or ceiling mounted.
- More expensive models give excellent picture quality in most light conditions.
- They can be used for video as well as data projection.
- Most can be easily connected to different computers.

Some disadvantages of data projectors are:

- Cheaper projectors require some form of blackout or light reduction in the room to be effective.
- New bulbs can be expensive.

Interactive whiteboards

This technology requires three pieces of equipment: a computer, a projector and a touch-sensitive whiteboard. The computer is connected to the projector and whiteboard, and the projector displays the computer

screen image onto the whiteboard. The computer can then be controlled from the whiteboard. As you point at active elements on the board using your finger or an appropriate electronic 'pen', the action is transmitted to the computer, as happens when using, for example, a mouse.

case study

A group of Year 2 children is learning to reason about numbers. To develop the children's understanding, the teacher is using a program called Toy Shop, which involves buying toys. Her computer is connected via a projector to an interactive whiteboard at the front of the class. The whiteboard acts as a large screen display, so that all the children can see it clearly.

Two children come to the whiteboard to play the game. The whiteboard is interactive, so the children only need to touch the coins on the whiteboard to activate the computer. The rest of the class can see the children touch the coins, so they are able to relate cause and effect and can easily contribute to discussions on the strategies being used by the children playing the game.

Interactive whiteboards generally follow one of three design characteristics:

- The lowest cost is the infrared add-on (one size fits all) to an existing whiteboard that allows the board to become an electronic copy-board.



- At a higher cost is the dual membrane resistive board, which can be operated with a pen or a finger/fingertip. These are often criticised for a perceived lack of breadth in their operation, but very few schools have anything but praise for their use.
- The highest cost comes with a solid state impact-resistant whiteboard, which can only be operated with an electronic pen, or with a more expensive variant offering control via a cordless infrared pen and/or A5/A6 pads.

case study

In an art department, three digital video sequences have been made of someone carrying out a task to explain the process of mounting and displaying work – skilful use of a cutter, positioning work, and gluing work. These video sequences are then shown to classes via the computer and an interactive whiteboard. Text instructions are displayed on the screen at the same time. Teachers find the high-tech approach much better than performing a class demonstration, because the whole class can see it clearly, the process can be discussed, and sequences can be run again and again if a particular point needs to be stressed.

Interactive whiteboards have many potential advantages. For example, they can:

- allow staff and/or students to investigate a screen without the use of a computer because the screen itself is sensitive
- offer the same features as a traditional whiteboard such as the ability to write directly on the board, circle things, highlight or label elements on the screen, and erase errors
- offer an on-screen keyboard that is superimposed over the image of the computer screen, allowing you to enter text or data into almost any application
- enable editing on screen and the recording of any/all changes or additions
- encourage often-technophobic teachers to deliver lessons naturally using technology from the front of the room
- enhance presentation content by easily integrating video/animation, graphics/text and audio
- allow pupils to absorb information more easily and participate in classroom discussions by freeing them from copious note taking
- save valuable preparation time
- act as an electronic flipchart (up to 99 pages), with all notes and diagrams saved as an HTML file for later use across the school's intranet, allowing an archive to be easily maintained and displayed
- allow notes to be stored and made available to students who missed the presentation/lecture.

Not all interactive whiteboards offer all the above features, however.

case study

Ian Bean, ICT teacher and co-ordinator at Priory Woods all-age community special school in Middlesbrough, defines inclusion as, 'giving every child every opportunity to take part in everything', and he has found that interactive whiteboards are a useful tool for engaging his pupils.

An interactive whiteboard is a touch-sensitive projection screen which, when touched, allows users to control a computer. Mr Bean has turned these properties to his advantage in the classroom. His pupils, who have severe, profound and multiple learning difficulties, interact with peers in painting and other activities, resulting in the beautiful digital images which cover the school's walls.