

A visualiser is a digital presentation and teaching tool that connects directly to a large screen such as an interactive whiteboard (IWB). When an item is placed on the visualiser viewing plate it is enlarged onto the IWB for everyone to see. It allows all types of content to be shown: a pupil's work, an object or the steps of a science experiment. Teachers can zoom in and out on intricate details, move the head of the visualiser to give different views and angles, take photos and write notes over the image with a marker pen. In low-tech speak - think of it as a small video camera on a long, moveable arm.

A specialist audio visual supplier for education collaborated with Local Authorities and schools across the UK to pilot the use of visualiser technology. Three hundred schools trialled Elmo visualisers in their classrooms for a ten week period to see how it can be used in a classroom - and to share teaching techniques.

Results

The immediate feedback from the project was that teachers found the visualisers improved pupil engagement. It became apparent the children appreciated seeing everything that was happening. Images instantly made their experiences real and practical.

One teacher, from Archbishop Sumner C of E School, said: "Visualisers are an incredibly useful piece of equipment within the classroom. I've used it on a daily basis for many activities."

Although each school adapted their use of visualisers for their own age group and subjects, a core set of benefits emerged. These included:

- Demonstrations can be made to the whole class without the need to crowd round
- Objects and text can be enlarged - which is especially beneficial for visually impaired students

- Preparation time is reduced - as there is less need to scan books and other resources
- It is ideal for showing tools and techniques that are difficult to demonstrate to a group - such as the use of a protractor in a maths class or shading techniques in art class
- It allows immediate peer, self and teacher assessment during a plenary by showing the children's work
- It's a simple, accessible and effective way to produce animation
- Live content can be shown in real time
- Pupils work can be recorded as it develops to form an evidence bank

Lewis Smith at George Watson College summed up how teachers and pupils that have used a visualiser in their classroom feel. "It's really good for showing and annotating pupils' work to the rest of the class and for live marking pupils work. I love it, and so do the children."

Visualise it

Visualisers. An educational revolution, or just another bit of kit waiting to get dusty in your cupboard? **Jodie Robinson** investigated a 300-school pilot to find out.



Case study: Aynsley Special School

Visualisers are also useful for teachers looking to ensure that their use of technology includes all pupils. Aynsley Special School in Stoke-on-Trent is a school for children with moderate learning difficulties. The lower school caters for around 30 children from nursery to year six. They trialed the visualiser in every aspect of their curriculum.

Literacy

- The visualiser allowed the teacher to make little books big by enlarging them on the screen. Shared reading could be done using books that would not normally have been included in lesson planning.
- Children could follow letter formation in handwriting using their magic pencils. While the teacher writes, everyone can watch and follow – because the teacher isn't standing in front of the board blocking the children's view. The letter formation was videoed using the visualiser and played back so the children could copy it.



Numeracy

- Counting with small objects took on a new dimension as little bugs became huge monsters on the screen! The children screamed with delight as they counted them!
- Studying the topic 'time', children were encouraged to bring a watch in from home to place under the visualiser – so they could watch its moving hands.



ICT

Teachers taught children the basic use of the visualiser. The children were enthusiastic and learned quickly. They were soon all able to zoom in and out, auto focus and switch between applications.

Throughout the term, Aynsley school encouraged children to bring things in from home or to look for things outside to put on the visualiser. This was very popular. The items brought in ranged from a clod of dirt to an ancient coin.

A teacher at Aynsley school said: "The visualiser has been used with fantastic results. We were amazed at how skilled the children became with the visualiser, and how they used it independently with such care. They understood its role in the classroom – and often suggested how they wanted it to be used during a lesson."

All the children were eager to show their work at the end of the lesson. This was fantastic for raising the standard of work produced. It also boosted the children's confidence and their speaking and listening skills.

History

- The children looked at tiny ancient Chinese artefacts. The pupils were fascinated by the detail they could see.

Geography

- Pupils used the visualiser to focus on areas of a world map to find China and surrounding countries. It enabled large-scale images to be shown effortlessly.



Case Study: Swiss Cottage Specialist SEN School

Swiss Cottage is recognised as one of the most successful special schools in the country with 150 learners, aged 2-16 years-old, with a range of learning difficulties and associated needs. Swiss Cottage teachers found visualisers greatly increased interactivity with the children and improved their concentration.

Maths

In one lesson, the objective was to understand the concept of doubling numbers. The teacher put a big picture of a double-decker bus under the visualiser camera and enlarged it onto the interactive whiteboard. Children put little cut-out people on both decks of the bus. The pupils could alter the number of people and move them around, learning how to make the number of people on each deck equal.

The benefits of the visualiser in this lesson were:

- All the pupils could very clearly see the problem
- The pupils were able to get involved in a physical activity
- All the pupils were engaged in discussion about doubles, near doubles and totals
- There was no shadow when pupils approached the interactive whiteboard

The main improvements the school saw in their pupils was in their engagement, attention to detail and the ease with which they shared work.



Top tips to get the most out of visualisers:

- Ensure that staff and pupils are already comfortable with the existing display technology in the school (like interactive whiteboards)
- Consider buying a visualiser with its own light source. (These are more versatile – but they cost more)
- Make time to see the technology being used. Try visiting a school that already uses the technology, or ask for a free demonstration
- Ask if the images/videos created by the visualiser can be shared easily. Usually, they can be saved on a laptop, on the interactive whiteboard or on an SD memory card.
- Skill the children up. The visualiser you choose needs to be robust enough for everyday use – but it will last longer when everyone knows what they are doing!
- Consider buying a docking station – it will allow you to shift from laptop to DVD to visualiser seamlessly
- Spend a little time planning when you will use your visualiser over the year
- Pair staff who are ICT literate with those who are less so to ensure consistent use within the school
- Encourage teachers to share their ideas and teaching techniques

Visualisers are like any other ICT resource. To get the most out of them, you need a plan. Used properly, visualisers mean the advantages we were promised with interactive whiteboards (increased pupil engagement, reduced preparation time, improved results) are finally realised.

To ensure visualisers don't just clutter your desk, you have to get the children on board. Once they have shared their work, interests and ideas on the visualiser, they won't let you forget about using it!

Jodie Robinson is a regular contributor to Special magazine, a member's magazine for NASEN (the National Association for Special Educational Needs). This feature first appeared in the September 2009 issue.